# OCEAN ECOLOGY DATA REPORT: SUBARCTIC PACIFIC OCEAN, MAY 1984 (Project SUPER)

by

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## Canadian Data Report Of Hydrography and Ocean Sciences

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Generally, the reports will contain raw and/or analyzed data but will not contain interpretations of the data. Such compilations will commonly have been prepared in support of work related to the programs and interests of the Ocean Science and Surveys (OSS) sector of the Department of Fisheries and Oceans.

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En général, les rapports contiennent des données brutes ou analysées mais ne fournissent pas d'interprétations des données. Ces compilations sont préparées le plus souvent à l'appui de travaux reliés aux programmes et intérêts du service des Sciences et Levés océaniques (SLO) du ministère des Pêches et des Océans.

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Les établissements des Sciences et Levés océaniques dans les régions et à l'administration centrale ont cessé de publier leurs diverses séries de rapports depuis décembre 1981. Vous trouverez dans l'index des publications du volume 38 du *Journal canadien des sciences halieutiques et aquatiques*, la liste de ces publications ainsi que le dernier numéro paru dans chaque catégorie. La nouvelle série a commencé avec la publication du Rapport n° 1 en janvier 1982.

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ABSTRACT

Forbes, J.R., K.L. Denman, D.L. Mackas and R.M. Brown. 1988. Ocean Ecology data report: subarctic Pacific Ocean, May 1984 (Project SUPER). Can. Data Rep. Hydrogr. Ocean Sci. 64: 147 p.

The results of a sampling program during May 1984 in the vicinity of Ocean Station P in the subarctic Pacific are presented. Data reported include physical, chemical and biological observations from bottle samples collected with an integrated vertical profiler, and zooplankton counts from samples collected by a Bioness multiple net system. These data were collected as part of the Canadian contribution to the Subarctic Pacific Ecosystem Research project.

Key words: data, oceanographic, Pacific Ocean

RÉSUMÉ

Forbes, J.R., K.L. Denman, D.L. Mackas and R.M. Brown. 1988. Ocean Ecology data report: subarctic Pacific Ocean, May 1984 (Project SUPER). Can. Data Rep. Hydrogr. Ocean Sci. 64: 147 p.

Les résultats d'une étude en Mai 1984 au large de la Station P dans l'Océan Pacifique subarctique sont présentés. Y comprises sont les données physiques, chimiques et biologiques de l'analyse des échantillons d'eau recueillis durant les profiles verticeaux, et les comptes de zooplankton recueillis avec un système Bioness avec des filets multiples. Ces données forment une partie du contribution Canadien au projet de recherche sur l'écosystème du Pacifique subarctique.

Mots-cles: données, océanographique, l'Océan Pacifique

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We appreciate the assistance at sea of R. Bigham, G. Chase, A. Gargett, S. Hill, K. de Macedo, M. Orellana, M.J. Perry and H. Sefton. Personnel of the CSS Parizeau provided excellent support to our field program. We thank R. Waters for the enumeration of phytoplankton samples, A. Nemec for software production and support, S. Buckingham for manuscript production, and R. Brinkhurst for reviewing the manuscript. As usual, S. Thomson provided expert editorial services.

## INTRODUCTION

The Ocean Ecology group at the Institute of Ocean Sciences carried out a research cruise (OE 84-02) to Ocean Station P (50oN, 145oW) from 7 May to 25 May 1984. This cruise was a cooperative operation with the U.S. ship RV Wecoma as part of the Subarctic Pacific Ecosystem Research project (SUPER). The major objectives of the cruise were twofold. The first was to test hypotheses related to the control of phytoplankton production and biomass in the subarctic Pacific. The second was to investigate variability of biological, physical and chemical parameters over moderate length scales of the order of 50km. On the return leg from Station P to the Strait of Juan de Fuca, CTD casts were performed, as part of the continuing set of time series observations along Line P. Physical, chemical and biological data were collected with an integrated oceanographic vertical profiler (OVP) consisting of several electronic sensors, a data acquisition system (DAS), and a remotely triggerable array of Niskin bottles (rosette sampler). In this report we present an inventory of all stations with a record of bottle samples that were collected at each station, the results of the analysis of bottle samples, and selected data from the electronic sensors. Species counts from phytoplankton samples collected by bottle and zooplankton counts collected by Bioness multiple net system are also included.

Additional data were collected on this cruise, but are not presented here. Denman and Gargett (1988) analyzed data from a drogued drifting buoy with a thermister chain and anemometer deployed near Station P from 12 May to 20 May 1984, a continuous record of above surface instantaneous photosynthetically active irradiance (PAR), and vertical microstructure profiles acquired with a free-fall profiler (FLY). Data from continuous underway mapping of temperature, conductivity, phytoplankton fluorescence, and zooplankton-sized particles on grid surveys in the vicinity of Station P and along Line P are available from the Ocean Ecology section at the Institute of Ocean Sciences.

## SAMPLING AND ANALYTICAL METHODS

### 1. Electronic sensors

Sensors mounted on the OVP for this cruise were a Guildline Model 8701 digital CTD, a Variosens III *in situ* fluorometer configured to measure chlorophyll fluorescence, a Sea Tech 25 cm path length transmissometer measuring beam attenuance, and a Licor 193SB spherical quantum irradiance sensor measuring *in situ* PAR. Outputs from these sensors were multiplexed, digitized and communicated in serial mode to the surface via a 7-conductor armored cable. At the surface, data from the DAS were received by a Hewlett Packard 9826 computer, which provided real-time display of temperature, salinity and chlorophyll fluorescence with depth. Data were stored on a hard disk, and simultaneously backed up on magnetic tape and in printed copy. During a typical cast of the OVP, the package was lowered at a speed of 0.5 to 1 m s-1 depending on sea conditions. At this time the electronic sensors were being sampled and logged at a frequency of 8 Hz. Decisions on the depths to collect water samples were based on the data acquired on the down-cast. The OVP was raised at a speed of approximately 0.5 m s-1 and bottles were tripped while in transit. Data from all sensors were sampled and recorded at the time that each bottle closed.

### 2. Bottle data

#### a) Temperature

Duplicate temperatures from protected reversing thermometers were taken periodically as a check on the CTD temperatures. An offset correction was later applied to the CTD temperatures.

#### b) Salinity

Salinity samples were collected periodically as a check on the CTD conductivity measurement. These samples were analysed on our return from the cruise on an Autosal Model 8400 induction salinometer. An offset correction was later applied to the CTD salinities. All salinities are reported as dimensionless quantities.

c) Chlorophyll

The chlorophyll a content of phytoplankton samples was determined at sea using the fluorometric technique outlined in Strickland and Parsons (1972). Samples were filtered onto glass fibre filters. Whatman 934AH filters were used for some samples, while Whatman GF/F filters were used for others. 934AH filters have a nominal particle retention size of 1.5 µm. These allowed a significant proportion of smaller cells containing chlorophyll to pass through. The majority of cells, although probably not all (Venrick et al. 1987), were retained on the GF/F filters, which have a nominal retention size of 0.7 µm. A predictive relationship for GF/F-retained chlorophyll concentration from 934AH-retained concentration was obtained by a linear regression of 13 sample pairs analysed using both filter types:

$$Chl_{gf/f} = 1.3037\ (Chl_{934ah}) - 0.0031$$

$$n = 13$$
$$r = 0.979$$

This relationship was used to provide estimates of total chlorophyll a when normalizing photosynthetic parameters, as chlorophyll concentrations for samples that were used for $^{14}C$ uptake measurement were determined using 934AH filters.

d) Inorganic nutrients

Reactive nitrate-nitrite, phosphate and silicate concentrations were measured following the cruise by colorimetry on a Technicon II Auto-Analyzer. Water samples were quick-frozen immediately after collection and were kept frozen until analysis.

e) Primary productivity

Photosynthetic parameters were estimated from photosynthesis versus irradiance [P(I)] experiments. Water was drawn directly from rosette bottles into dark containers. Subsamples of 60 ml (21 light bottles, 2 dark bottles) were taken in the ship's laboratory. These were inoculated with 0.291 MBq $NaH^{14}CO_3$ and incubated for 2 hours. The subsamples were filtered onto 0.45 µm Millipore HA filters, which were fumed over concentrated HCl for approximately 30 minutes, and placed in scintillation vials to which 15 ml Aquasol (New England Nuclear) was added. Sample activities were determined later using an LKB 1217 scintillation counter, with counting efficiencies determined by the sample channels ratio method.

P(I) data were fitted to the model of Platt et al. (1980) by a non-linear least squares fit using the Marquardt algorithm (Bevington, 1969). The model is of the form:

$$PB = P^{B}_{s} * (1-e^{-\alpha I/Ps})(e^{-\beta I/Ps})$$

where:

PB = normalized productivity
(mg C (mg Chl *a*)-1 h-1)

$P^{B}_{s}$ = maximum potential light saturated photosynthetic rate of the population
(mg C (mg Chl *a*)-1 h-1)

$\alpha$ = initial slope
(mg C (mg Chl *a*)-1 h-1 ($\mu$Ein s-1 m-2)-1)

$\beta$ = parameter characterizing photoinhibition
(mg C (mg Chl *a*)-1 h-1 ($\mu$Ein s-1 m-2)-1)

Four derived parameters were calculated from these for each experiment:

$$P^{B}_{m} = P^{P}_{s} ( \alpha /( \alpha+\beta )( \beta /( \alpha+\beta )^{(\beta / \alpha)}$$

$$Im = P^{B}_{s} / \alpha \log_e((\alpha +\beta )/(\beta ))$$

$$I_k = P^{B}_{m} / \alpha$$

$$Ib = P^{B}_{s} / \beta$$

$P^{B}_{m}$ is the maximum realized photosynthetic rate. $I_m$ and $I_k$ have utility as indices of photoadaptation, and $I_b$ is an index of photoinhibition, representing the irradiance at which $PB = 0.37\ P^{B}_{s}$ in the portion of the curve where $I > I_m$. All photosynthetic parameters have been normalized to chlorophyll concentration. The units of PB, $P^{B}_{s}$ and $P^{B}_{m}$ are mg C (mg Chl *a*)-1 h-1; the units of $\alpha$ and $\beta$ are mg C (mg Chl *a*)-1 h-1 ($\mu$Ein s-1 m-2); the units of I, $I_m$, $I_k$ and $I_b$ are $\mu$Ein s-1 m-2.

For each experiment, the variance of the data about the fitted curve was determined (Forbes et al., 1987), from which the correlation coefficient, r, was calculated.

## 3. Phytoplankton and zooplankton abundance

### a) Phytoplankton

Paired samples were drawn from rosette bottles, with one sample preserved in alkaline Lugol's solution and the other in acid Lugol's solution (Throndsen, 1978). Cells were settled in counting chambers and counted on an inverted microscope. The names of the taxa are abbreviated in some cases and a complete taxonomic list precedes the data records as a guide to taxonomic order and abbreviations. This list includes all taxa recorded by Ocean Ecology surveys in British Columbia coastal waters and the northeast Pacific from 1978 to 1986. It may therefore be considered a reasonably complete checklist of phytoplankton occurring in these waters that can be identified by the technique used here. Samples in the data records are designated by station, rosette bottle number and preservation method. For example, 6-9N represents the sample collected at station 6, bottle 9, which was preserved with alkaline Lugol's solution. 6-9A is the sample from the same bottle preserved with acid Lugol's. If the preservation solution is not recorded, the results reported are combined data, with coccolithophorids enumerated from the alkaline sample and remaining taxa enumerated from the acid sample. Two samples were submitted blind to the analyst from each of station 21-7 and from 21-9. She was requested to count duplicate subsamples from each of these. This resulted in four sets of counts from each rosette bottle. The duplicate pairs from 21-7 are designated as 21-7W and 21-7X, and 21-7Y and 21-7Z respectively. The same numbering system was used for samples and subsamples from 21-9. The counts from all of these include material preserved in both alkaline and acid Lugol's solution. The analyst for all phytoplankton identification and enumeration was Rosemary Waters.

### b) Zooplankton

Zooplankton sampling was performed with a Bioness multiple opening and closing net system. As for the phytoplankton data, abbreviations of taxa are used in the data records. A complete taxonomic list, with the abbreviations used, precedes the data records. A full tow consisted of an oblique haul with up to 8 samples acquired from specific depth strata. These samples are designated by station number and net number. For example J-2 represents the sample from net 2 at station J. A table following the the data records provides details of the sample depths for each zooplankton sample. Samples were preserved with buffered formaldehyde. All samples were analyzed by Hugh Sefton.

## ESTIMATED ACCURACY AND PRECISION OF DATA

### 1. CTD and other electronic sensors

The fundamental limit to resolution is given by the 12 bit accuracy (equivalent to 0.025% of full scale) of the analog to digital converter used. Manufacturers give the accuracy and resolution of the sensors as follows:

| Variable | Accuracy(±) | Resolution |
|---|---|---|
| Pressure | 1.25 dbar | 0.25 dbar |
| Temperature | 0.01 C | 0.003 C |
| Equivalent salinity | 0.01 | 0.005 |
| % transmission | 0.5 % | 0.5 % |
| *In situ* PAR | 7.00 % | 0.50 % |

### 2. Chlorophyll

Parsons et al. (1984) estimated that the precision (± 2 ) of the fluorometric method for replicate measurements at the 0.5 mg m-3 level should be better than 10 %. An estimate of the precision of the method as practised here was made on a previous cruise. The mean of 15 replicate samples (3 from each of 5 rosette bottles tripped at the same depth) was 3.01 ± 0.30 mg Chl *a* m-3 (± 9.8 %). The coefficient of variation was 4.9 %. Analysis of variance indicated no significant difference between samples drawn from one or more bottles tripped at the same depth ($F_t$ = 0.307, $F_r$ = 0.712).

### 3. Inorganic nutrients

Replicate analyses have been performed for 245 samples selected from four cruises by the Ocean Ecology section. Details are provided in detail in Denman et al. (1985). In summary, the expected percentage error for nitrate plus nitrite was 14.3 %, for phosphate was 9.4 %, and for silicate was 11.5 %.

### 4. Primary productivity

The mean coefficient of variation for 23 pairs of replicate light bottles incubated under identical irradiance was determined on a previous cruise to be 4.1 %, with a range from 0.02 % to 26.0 %.

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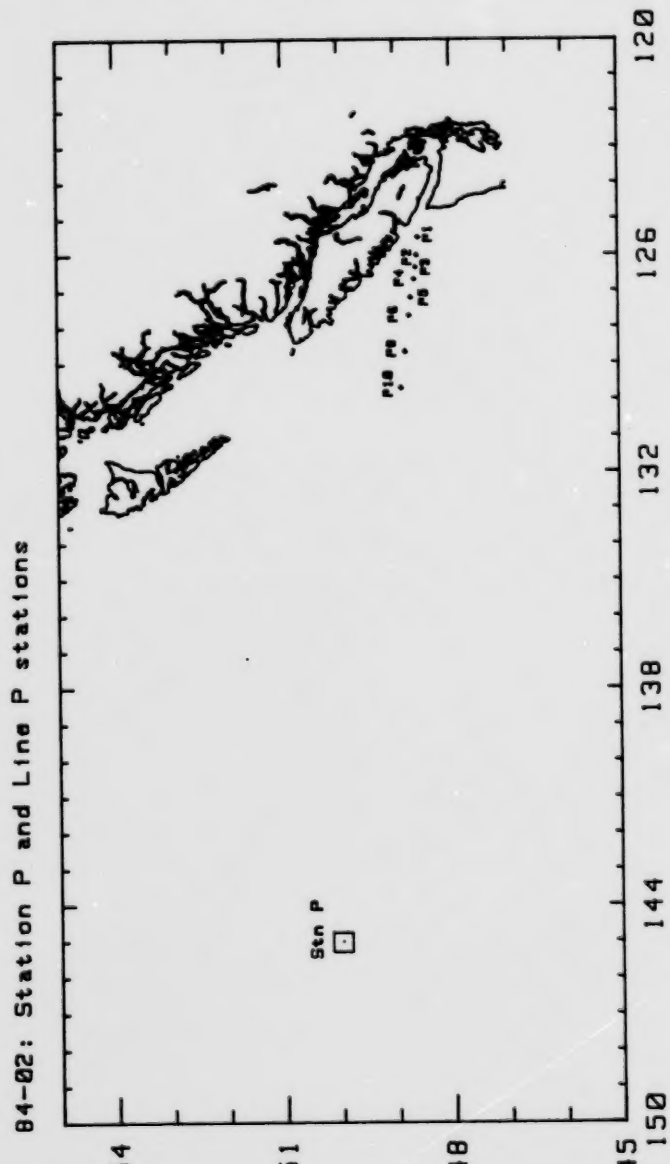
DATA SECTION 1

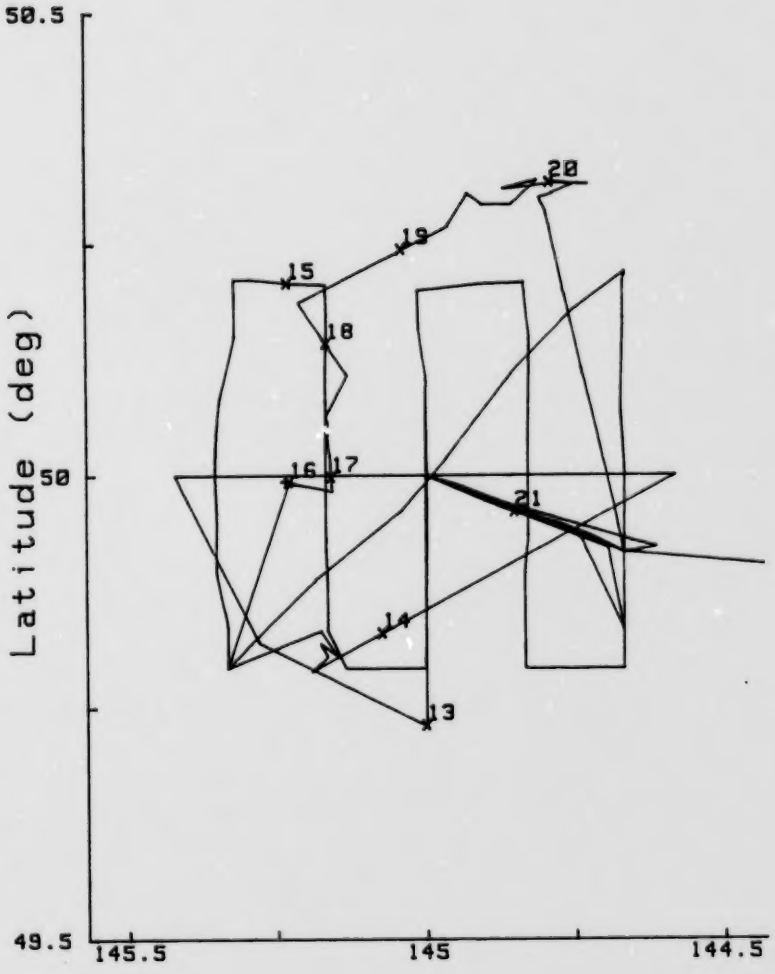
Plots of a. Location of Station P and line P stations occupied
b. Cruise track in the vicinity of Station P.
c. Location of CTD/rosette casts in the vicinity of Station P

Location of Station P and Line P stations occupied.


84-02: Station P and Line P stations
Stn P
54
51
48
45
150
144
138
132
126
120

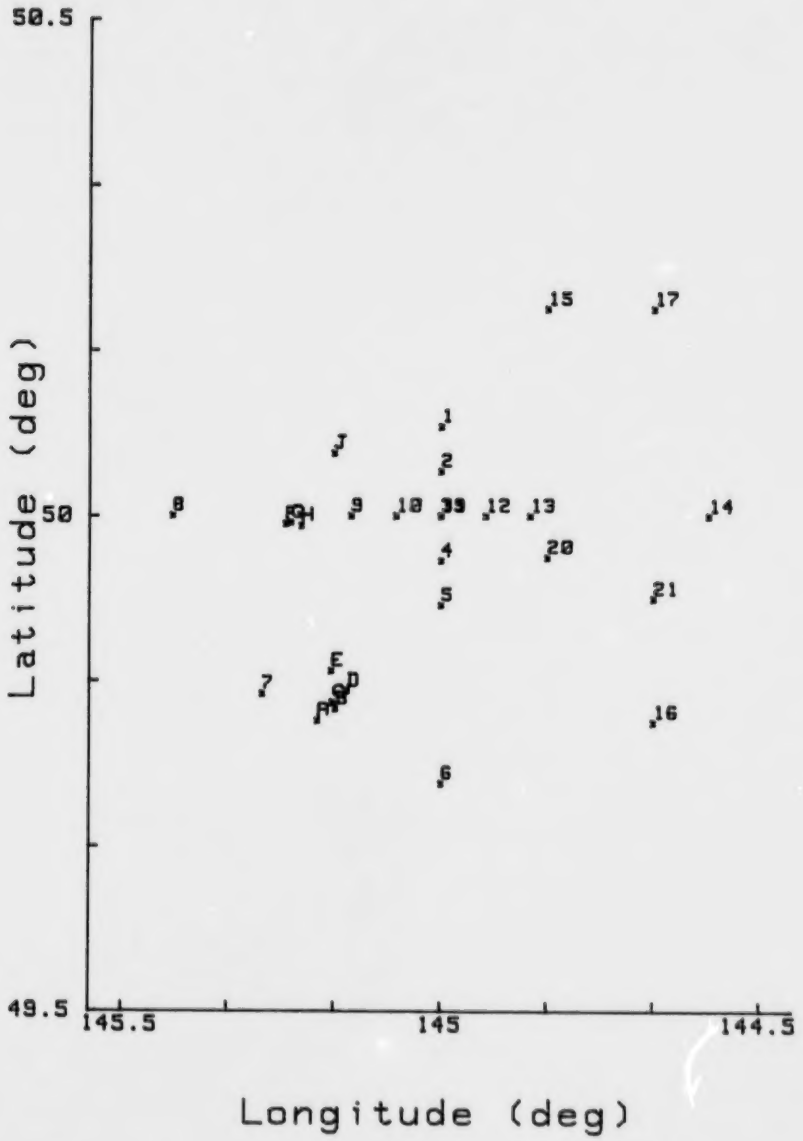
Cruise track in the vicinity of Station P.
Positions are indicated for each day (May 1984) at 1200 PDT.

Cruise Track 84-02



Location of CTD/rosette casts in the vicinity of Station P.

CTD Positions 84-02



DATA SECTION 2

Data inventory

Cruise 84-02

DATA TYPES AVAILABLE
'+' : available, '-' : not available

| Stn. No. | Date Da | Mo | Time (PDT) | Latitude | Longitude | CTD | Vario. CHL a | Beam Atten-uance | In Situ Light | Nutri-ents | CHL a | C14 | Phyto-plank-ton | Zoo-plank-ton |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12 | 05 | 0921 | 50 05.4' | 145 00.0' | + | + | + | + | + | + | + | + | + |
| 2 | 12 | 05 | 1219 | 50 02.7' | 145 00.0' | + | + | + | + | - | - | - | - | - |
| 3A | 12 | 05 | 1425 | 50 00.0' | 145 00.0' | + | + | + | + | - | + | - | - | - |
| 3B | 12 | 05 | 1452 | 50 00.0' | 145 00.0' | + | + | + | + | + | + | + | + | + |
| 4 | 12 | 05 | 1642 | 49 57.3' | 145 00.0' | + | + | + | + | - | - | - | - | - |
| 5 | 12 | 05 | 1925 | 49 54.6' | 145 00.0' | + | + | + | + | - | + | + | + | + |
| 6A | 13 | 05 | 0051 | 49 43.8' | 145 00.0' | + | + | + | - | - | + | - | - | + |
| 6B | 13 | 05 | 0114 | 49 43.8' | 145 00.0' | + | + | + | - | + | + | + | + | - |
| 7 | 13 | 05 | 0302 | 49 50.0' | 145 17.6' | + | + | + | - | - | - | - | - | + |
| 8A | 13 | 05 | 0706 | 50 00.0' | 145 25.2' | + | + | + | + | - | + | - | - | + |
| 8B | 13 | 05 | 0723 | 50 00.0' | 145 25.2' | + | + | + | + | + | + | + | + | - |
| 9 | 13 | 05 | 0955 | 50 00.0' | 145 08.4' | + | + | + | + | - | + | - | - | + |
| 10 | 13 | 05 | 1316 | 50 00.0' | 145 04.2' | + | + | + | + | - | - | - | - | - |
| 11 | 13 | 05 | 1359 | 50 00.0' | 145 00.0' | + | + | + | + | + | + | + | + | + |
| 12 | 13 | 05 | 1624 | 50 00.0' | 144 55.8' | + | + | + | + | - | - | - | - | - |
| 13 | 13 | 05 | 1702 | 50 00.0' | 144 51.6' | + | + | + | + | - | + | - | - | + |
| 14A | 13 | 05 | 2111 | 50 00.0' | 144 34.8' | + | + | + | + | - | + | - | - | + |
| 14B | 13 | 05 | 2129 | 50 00.0' | 144 34.8' | + | + | + | + | + | + | + | - | - |
| A | 14 | 05 | 0127 | 49 47.6' | 145 11.6' | + | + | + | - | + | + | + | + | - |
| B | 14 | 05 | 0439 | 49 48.3' | 145 09.9' | + | + | + | - | - | + | + | - | - |
| C | 14 | 05 | 0728 | 49 48.7' | 145 10.2' | + | + | + | + | - | + | + | - | - |
| D | 14 | 05 | 1027 | 49 49.4' | 145 08.8' | + | + | + | + | - | + | + | - | - |
| E | 14 | 05 | 1322 | 49 50.6' | 145 10.3' | + | + | + | + | + | + | + | + | - |
| 15 | 15 | 05 | 1128 | 50 12.5' | 145 50.0' | + | + | + | + | - | + | - | - | - |
| 16 | 15 | 05 | 1537 | 49 47.5' | 144 40.0' | + | + | + | + | - | + | - | - | - |
| 17 | 15 | 05 | 1842 | 50 12.5' | 144 40.0' | + | + | + | + | - | + | - | - | - |
| F | 16 | 05 | 0159 | 49 59.5' | 145 14.6' | + | + | + | - | + | + | + | + | - |
| G | 16 | 05 | 0324 | 49 59.6' | 145 14.1' | + | + | + | - | - | + | - | - | + |
| H | 16 | 05 | 0603 | 49 59.4' | 145 13.1' | + | + | + | - | - | + | + | - | - |
| I | 16 | 05 | 2118 | 49 58.9' | 145 09.3' | - | - | - | - | - | + | - | - | - |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| J | 17 05 1000 | 50 03.8' | 145 10.0' | + | + | + | + | − | + | − | − | + |
| K | 19 05 0530 | 50 16.1' | 144 57.6' | − | − | − | − | − | + | + | + | + |
| L | 19 05 0951 | 50 18.2' | 144 55.6' | − | − | − | − | − | + | + | − | − |
| M | 19 05 1147 | 50 17.5' | 144 54.2' | − | − | − | − | − | + | + | − | − |
| N | 19 05 1500 | 50 17.5' | 144 51.2' | − | − | − | − | − | + | + | − | − |
| O | 19 05 1745 | 50 19.1' | 144 48.6' | − | − | − | − | − | + | + | − | − |
| P | 19 05 2045 | 50 18.5' | 144 52.0' | − | − | − | − | − | + | + | − | − |
| Q | 19 05 2348 | 50 18.9' | 144 47.3' | − | − | − | − | − | + | − | − | − |
| R | 20 05 0405 | 50 18.8' | 144 43.4' | − | − | − | − | − | + | + | + | − |
| S | 20 05 0630 | 50 19.0' | 144 47.0' | − | − | − | − | + | + | + | − | − |
| T | 20 05 1000 | 50 18.1' | 144 45.0' | − | − | − | − | − | + | + | − | − |
| U | 20 05 1312 | 50 18.2' | 144 47.1' | − | − | − | − | − | + | + | − | − |
| 18 | 20 05 2145 | 49 55.1' | 144 38.3' | − | − | − | − | − | − | − | − | + |
| 19 | 21 05 0509 | 50 00.0' | 145 00.0' | + | + | + | − | − | + | − | − | − |
| 20 | 21 05 0805 | 49 57.5' | 144 50.0' | + | + | + | + | + | + | − | − | − |
| 21A | 21 05 1029 | 49 55.0' | 144 40.0' | + | + | + | + | + | + | + | + | − |
| 21B | 21 05 1106 | 49 55.0' | 144 40.0 | + | + | + | + | − | − | − | − | − |
| P10 | 23 05 1947 | 48 53.6' | 129 40.0' | + | − | + | − | − | − | − | − | − |
| P8 | 24 05 0006 | 48 49.0' | 128 40.0' | + | − | + | − | − | − | − | − | + |
| P6 | 24 05 0456 | 48 44.6' | 127 40.0' | + | − | + | − | − | − | − | − | − |
| P5 | 24 05 0822 | 48 42.6' | 127 10.0' | + | − | + | − | − | − | − | + | + |
| P4 | 24 05 1126 | 48 39.0' | 126 40.0' | + | − | + | − | − | − | − | + | − |
| P3 | 24 05 1338 | 48 37.5' | 126 20.0' | + | − | + | − | − | − | − | − | − |
| P2 | 24 05 1601 | 48 36.0' | 126 00.0' | + | + | + | + | − | + | − | − | + |
| P1 | 24 05 1754 | 48 34.5' | 125 30.0' | + | + | + | + | − | + | − | − | − |

DATA SECTION 3

CTD and analytical data

DATABASE LISTING FOR CRUISE 84-02. PAGE 1
* - Indicates that data is from an electronic sensor.

| STN NO. | BOT NO. | DEPTH (dbar) | *TEMP (deg C) | *SAL | CHL (mg/m3) (934) | CHL (mg/m3) (GF/F) | Pm | NO3 (mmol / m3) | PO4 (mmol / m3) | SiO4 (mmol / m3) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 01 | 216.3 | 4.39 | 33.88 | | | | 35.1 | 2.86 | 49.5 |
| 1 | 02 | 125.4 | 4.96 | 33.81 | | | | 19.8 | 2.46 | 31.6 |
| 1 | 03 | 76.4 | 6.16 | 32.62 | | .34 | | 12.8 | 1.39 | 19.4 |
| 1 | 04 | 41.2 | 6.59 | 32.58 | .29 | | 1.71 | 11.7 | 1.33 | 17.9 |
| 1 | 05 | 41.4 | 6.59 | 32.59 | | | | | | |
| 1 | 06 | 24.1 | 6.77 | 32.55 | | .47 | | 11.9 | 1.30 | 18.4 |
| 1 | 07 | 12.3 | 6.92 | 32.58 | | .45 | | 11.9 | 1.30 | 18.2 |
| 1 | 08 | 7.4 | 6.92 | 32.58 | .27 | | 3.53 | | | |
| 1 | 09 | 7.2 | 6.92 | 32.58 | | | | 12.2 | 1.29 | 19.2 |
| 1 | 10 | 2.0 | 6.92 | 32.58 | | .54 | | 12.2 | 1.36 | 18.6 |
| 2 | 01 | 193.8 | 4.60 | 33.85 | | | | | | |
| 3A | 01 | 72.9 | 6.52 | 32.59 | | .36 | | | | |
| 3A | 02 | 71.9 | 6.53 | 32.58 | | | | | | |
| 3A | 03 | 23.5 | 7.02 | 32.58 | | .31 | | | | |
| 3A | 04 | 24.2 | 7.03 | 32.57 | | | | | | |
| 3A | 05 | 13.0 | 7.04 | 32.57 | | .32 | | | | |
| 3A | 06 | 12.8 | 7.04 | 32.57 | | | | | | |
| 3A | 07 | 8.6 | 7.04 | 32.57 | | .32 | | | | |
| 3A | 08 | 8.8 | 7.05 | 32.57 | | | | | | |
| 3A | 09 | 2.1 | 7.06 | 32.57 | | .22 | | | | |
| 3A | 10 | 1.9 | 7.06 | 32.57 | | | | | | |
| 3B | 01 | 209.0 | 4.54 | 33.86 | | | | 34.7 | 2.63 | 48.3 |
| 3B | 02 | 144.8 | 4.75 | 33.79 | | | | 31.7 | 2.48 | 54.9 |
| 3B | 03 | 122.8 | 4.81 | 33.72 | | | | 29.4 | 2.24 | 48.7 |
| 3B | 04 | 98.8 | 4.88 | 33.57 | | | | 27.4 | 2.18 | 42.5 |
| 3B | 05 | 71.4 | 6.61 | 32.59 | | | | 12.2 | 1.31 | 18.1 |
| 3B | 06 | 41.4 | 6.74 | 32.57 | .25 | .31 | 1.68 | 11.7 | 1.27 | 17.5 |
| 3B | 07 | 41.6 | 6.74 | 32.57 | | | | | | |
| 3B | 08 | 42.3 | 6.74 | 32.57 | | | | | | |
| 3B | 09 | 9.0 | 7.07 | 32.57 | .23 | | 2.65 | 11.6 | 1.27 | 17.5 |
| 3B | 10 | 9.0 | 7.07 | 32.57 | | | | | | |
| 5 | 01 | 205.8 | 4.43 | 33.86 | | | | | | |
| 5 | 02 | 64.9 | 6.68 | 32.59 | | .43 | | | | |
| 5 | 03 | 41.4 | 6.76 | 32.57 | .39 | .48 | 2.14 | | | |
| 5 | 04 | 41.5 | 6.78 | 32.57 | | | | | | |
| 5 | 05 | 42.1 | 6.76 | 32.57 | | | | | | |
| 5 | 06 | 20.0 | 7.06 | 32.57 | | .41 | | | | |
| 5 | 07 | 10.5 | 7.06 | 32.57 | | .42 | | | | |
| 5 | 08 | 8.0 | 7.06 | 32.57 | .42 | | | | | |
| 5 | 09 | 8.3 | 7.06 | 32.57 | | | | | | |
| 5 | 10 | 2.6 | 7.06 | 32.57 | | .43 | | | | |
| 6A | 01 | 62.8 | 6.37 | 32.60 | | .54 | | | | |

DATABASE LISTING FOR CRUISE 84-02. PAGE 2
* - Indicates that data is from an electronic sensor.

| STN NO. | BOT NO. | DEPTH (dbar) | *TEMP (deg C) | *SAL | CHL (mg/m3) (934) | (GF/F) | Pm | NO3 (mmol / m3) | PO4 | SiO4 |
|---|---|---|---|---|---|---|---|---|---|---|
| 6A | 02 | 62.8 | 6.37 | 32.59 | | | | | | |
| 6A | 03 | 22.1 | 6.95 | 32.56 | | .52 | | | | |
| 6A | 04 | 21.2 | 6.94 | 32.57 | | | | | | |
| 6A | 05 | 11.0 | 6.98 | 32.56 | | .49 | | | | |
| 6A | 06 | 11.4 | 6.98 | 32.56 | | | | | | |
| 6A | 07 | 7.1 | 6.97 | 32.56 | | .50 | | | | |
| 6A | 08 | 5.8 | 6.97 | 32.56 | | | | | | |
| 6A | 09 | 1.2 | 6.98 | 32.55 | | | | | | |
| 6A | 10 | 1.7 | 6.97 | 32.46 | | | | | | |
| 6B | 01 | 206.9 | 4.31 | 33.86 | | | | 35.5 | 2.61 | 49.1 |
| 6B | 02 | 150.2 | 4.60 | 33.82 | | | | 34.0 | 2.63 | 60.8 |
| 6B | 03 | 127.7 | 4.79 | 33.78 | | | | 29.8 | 2.38 | 51.4 |
| 6B | 04 | 102.8 | 4.73 | 33.66 | | | | 29.5 | 2.31 | 48.0 |
| 6B | 05 | 75.4 | 5.88 | 32.66 | | | | 13.6 | 1.44 | 21.1 |
| 6B | 06 | 40.1 | 6.40 | 32.59 | .43 | .58 | 1.33 | 12.8 | 1.35 | 22.2 |
| 6B | 07 | 38.8 | 6.41 | 32.59 | | | | | | |
| 6B | 08 | 38.1 | 6.41 | 32.59 | | | | | | |
| 6B | 09 | 9.5 | 6.96 | 32.57 | .49 | | 1.23 | 10.8 | 1.22 | 16.7 |
| 6B | 10 | 10.0 | 6.96 | 32.56 | | | | | | |
| 8A | 01 | 74.6 | 6.00 | 32.64 | | .29 | | | | |
| 8A | 02 | 75.9 | 5.98 | 32.65 | | | | | | |
| 8A | 03 | 23.9 | 6.81 | 32.57 | | .64 | | | | |
| 8A | 04 | 25.6 | 6.81 | 32.58 | | | | | | |
| 8A | 05 | 13.5 | 6.81 | 32.57 | | .63 | | | | |
| 8A | 06 | 13.6 | 6.81 | 32.57 | | | | | | |
| 8A | 07 | 9.4 | 6.81 | 32.57 | | | | | | |
| 8A | 08 | 8.2 | 6.81 | 32.58 | | | | | | |
| 8A | 09 | 2.0 | 6.81 | 32.57 | | .56 | | | | |
| 8A | 10 | 2.0 | 6.81 | 32.57 | | | | | | |
| 8B | 01 | 205.6 | 4.06 | 33.84 | | | | 37.8 | 2.93 | 48.2 |
| 8B | 02 | 148.7 | 4.17 | 33.75 | | | | 34.4 | 2.61 | 45.0 |
| 8B | 03 | 118.9 | 4.28 | 33.68 | | | | 31.5 | 2.42 | 43.8 |
| 8B | 04 | 99.0 | 4.44 | 33.59 | | | | 29.2 | 2.30 | 41.4 |
| 8B | 05 | 78.0 | 5.92 | 32.69 | | | | 14.4 | 1.45 | 21.8 |
| 8B | 06 | 41.9 | 6.26 | 32.58 | .53 | .68 | 1.70 | 13.0 | 1.37 | 20.3 |
| 8B | 07 | 39.9 | 6.28 | 32.57 | | | | | | |
| 8B | 08 | 41.1 | 6.26 | 32.57 | | | | | | |
| 8B | 09 | 9.1 | 6.78 | 32.58 | .54 | | | 12.1 | 1.31 | 19.0 |
| 8B | 10 | 9.8 | 6.78 | 32.58 | | | | | | |
| 9 | 01 | 198.8 | 4.32 | 33.85 | | | | | | |
| 9 | 02 | 67.7 | 6.32 | 32.60 | | .37 | | | | |
| 9 | 03 | 39.7 | 6.51 | 32.58 | | .58 | | | | |

DATABASE LISTING FOR CRUISE 84-02. PAGE 3
* - Indicates that data is from an electronic sensor.

| STN NO. | BOT NO. | DEPTH (dbar) | *TEMP (deg C) | *SAL | CHL (mg/m3) (934) | CHL (mg/m3) (GF/F) | Pm | NO3 (mmol / m3) | PO4 (mmol / m3) | SiO4 (mmol / m3) |
|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 04 | 21.7 | 6.94 | 32.58 | | .52 | | | | |
| 9 | 05 | 14.0 | 6.94 | 32.57 | | .48 | | | | |
| 9 | 06 | 8.5 | 6.94 | 32.57 | | | | | | |
| 9 | 07 | 2.1 | 6.95 | 32.57 | | .44 | | | | |
| 11 | 01 | 201.0 | 4.48 | 33.85 | | | | 36.3 | 2.73 | 61.0 |
| 11 | 02 | 148.3 | 4.67 | 33.80 | | | | 32.8 | 2.49 | 53.1 |
| 11 | 03 | 121.6 | 4.84 | 33.73 | | | | 29.2 | 2.36 | 47.6 |
| 11 | 04 | 99.4 | 4.89 | 33.58 | | | | 27.7 | 2.05 | 42.5 |
| 11 | 05 | 73.3 | 6.62 | 32.59 | | | | 11.5 | 1.32 | 17.0 |
| 11 | 06 | 40.9 | 6.94 | 32.57 | .37 | | 2.22 | 11.5 | 1.25 | 17.4 |
| 11 | 07 | 41.4 | 6.92 | 32.57 | | | | | | |
| 11 | 08 | 24.6 | 6.99 | 32.57 | | | | 11.5 | 1.29 | 18.3 |
| 11 | 09 | 8.1 | 7.03 | 32.56 | .38 | | 1.96 | 11.6 | 1.20 | 17.4 |
| 11 | 10 | 8.6 | 7.03 | 32.57 | | | | | | |
| 13 | 01 | 203.6 | 4.56 | 33.84 | | . | | | | |
| 13 | 02 | 68.8 | 6.70 | 32.58 | | .33 | | | | |
| 13 | 03 | 40.4 | 6.90 | 32.58 | .45 | .60 | | | | |
| 13 | 04 | 24.2 | 7.01 | 32.57 | | .39 | | | | |
| 13 | 05 | 12.1 | 7.07 | 32.56 | | | | | | |
| 13 | 06 | 7.4 | 7.12 | 32.56 | .47 | .59 | | | | |
| 13 | 07 | 2.0 | 7.15 | 32.57 | | .62 | | | | |
| 14A | 01 | 72.7 | 6.62 | 32.59 | | .27 | | | | |
| 14A | 02 | 72.3 | 6.64 | 32.59 | | | | | | |
| 14A | 03 | 24.0 | 7.03 | 32.56 | | .54 | | | | |
| 14A | 04 | 23.7 | 7.04 | 32.56 | | | | | | |
| 14A | 05 | 13.3 | 7.10 | 32.57 | | .50 | | | | |
| 14A | 06 | 12.7 | 7.10 | 32.57 | | | | | | |
| 14A | 07 | 8.9 | 7.10 | 32.57 | | .50 | | | | |
| 14A | 08 | 8.6 | 7.10 | 32.56 | | | | | | |
| 14A | 09 | 1.6 | 7.10 | 32.56 | | .55 | | | | |
| 14A | 10 | 1.5 | 7.10 | 32.56 | | | | | | |
| 14B | 01 | 207.8 | 4.54 | 33.85 | | | | 36.2 | 2.82 | 49.3 |
| 14B | 02 | 148.1 | 4.93 | 33.82 | | | | 32.8 | 2.52 | 45.5 |
| 14B | 03 | 124.1 | 5.20 | 33.81 | | | | 31.0 | 2.37 | 46.8 |
| 14B | 04 | 99.0 | 5.46 | 33.71 | | | | 29.5 | 2.18 | 42.5 |
| 14B | 05 | 74.3 | 6.37 | 32.70 | | | | 13.5 | 1.35 | 19.8 |
| 14B | 06 | 41.1 | 6.84 | 32.56 | .66 | .57 | | 11.7 | 1.27 | 17.9 |
| 14B | 07 | 41.1 | 6.82 | 32.56 | | | | | | |
| 14B | 08 | 40.6 | 6.82 | 32.57 | | | | | | |
| 14B | 09 | 9.6 | 7.11 | 32.56 | .43 | | 1.16 | 9.9 | 1.28 | 15.3 |
| 14B | 10 | 9.0 | 7.11 | 32.56 | | | | | | |
| A | 01 | 204.0 | 4.03 | 33.80 | | | | 36.9 | 2.82 | 64.0 |

DATABASE LISTING FOR CRUISE 84-02. PAGE 4
* - Indicates that data is from an electronic sensor.

| STN NO. | BOT NO. | DEPTH (dbar) | *TEMP (deg C) | *SAL | CHL (mg/m3) (934) | CHL (mg/m3) (GF/F) | Pm | NO3 (mmol / m3) | PO4 (mmol / m3) | SiO4 (mmol / m3) |
|---|---|---|---|---|---|---|---|---|---|---|
| A | 02 | 152.4 | 4.11 | 33.73 | | | | 32.6 | 2.47 | 57.8 |
| A | 03 | 100.0 | 4.65 | 33.41 | | | | 26.3 | 2.15 | 41.2 |
| A | 04 | 70.9 | 6.25 | 32.67 | | .44 | | 12.8 | 1.38 | 19.4 |
| A | 05 | 42.3 | 6.68 | 32.57 | .57 | | .76 | | | |
| A | 06 | 42.2 | 6.68 | 32.57 | .61 | | | 11.8 | 1.30 | 17.9 |
| A | 07 | 21.9 | 7.00 | 32.60 | | .61 | | 11.4 | 1.28 | 17.7 |
| A | 08 | 11.4 | 7.06 | 32.57 | .47 | | 1.17 | | | |
| A | 09 | 10.6 | 7.06 | 32.57 | .46 | | | 11.7 | 1.26 | 18.4 |
| B | 01 | 202.4 | 4.01 | 33.81 | | | | | | |
| B | 02 | 69.2 | 6.18 | 32.63 | | .45 | | | | |
| B | 03 | 41.4 | 6.64 | 32.58 | .58 | | .77 | | | |
| B | 04 | 41.9 | 6.64 | 32.57 | .56 | | | | | |
| B | 05 | 22.4 | 6.98 | 32.58 | | .56 | | | | |
| B | 06 | 9.8 | 7.05 | 32.56 | .49 | | 1.63 | | | |
| B | 07 | 9.1 | 7.05 | 32.57 | | | | | | |
| C | 01 | 209.8 | 4.01 | 33.80 | | | | | | |
| C | 02 | 70.8 | 6.00 | 32.71 | | .24 | | | | |
| C | 03 | 40.9 | 6.67 | 32.57 | .56 | | 2.08 | | | |
| C | 04 | 40.7 | 6.68 | 32.57 | | | | | | |
| C | 05 | 22.9 | 6.92 | 32.57 | | .52 | | | | |
| C | 06 | 8.8 | 6.92 | 32.57 | .56 | | 2.06 | | | |
| C | 07 | 8.9 | 6.91 | 32.57 | | | | | | |
| C | 08 | 8.9 | 6.92 | 32.57 | | | | | | |
| D | 01 | 202.7 | 4.20 | 33.84 | | | | | | |
| D | 02 | 69.2 | 6.00 | 32.66 | | | | | | |
| D | 03 | 40.4 | 6.42 | 32.58 | .65 | | 1.20 | | | |
| D | 04 | 41.2 | 6.44 | 32.58 | | | | | | |
| D | 05 | 41.1 | 6.44 | 32.59 | | | | | | |
| D | 06 | 20.6 | 6.99 | 32.58 | | .70 | | | | |
| D | 07 | 8.3 | 7.01 | 32.58 | .60 | | 1.87 | | | |
| D | 08 | 8.5 | 7.01 | 32.57 | | | | | | |
| D | 09 | 8.9 | 7.01 | 32.58 | | | | | | |
| E | 01 | 207.3 | 4.01 | 33.81 | | | | 36.9 | 2.90 | 51.7 |
| E | 02 | 150.7 | 4.12 | 33.75 | | | | 33.3 | 2.68 | 47.8 |
| E | 03 | 101.6 | 4.39 | 33.56 | | | | 24.3 | 2.26 | 38.0 |
| E | 04 | 69.6 | 6.19 | 32.63 | | .47 | | | | |
| E | 05 | 39.1 | 6.79 | 32.56 | .64 | | 2.47 | 12.0 | 1.33 | 19.0 |
| E | 06 | 39.1 | 6.78 | 32.59 | | | | | | |
| E | 07 | 20.9 | 6.90 | 32.58 | | .77 | | 11.4 | 1.26 | 17.5 |
| E | 08 | 8.0 | 6.90 | 32.57 | .64 | | 1.92 | | | |
| E | 09 | 8.0 | 6.90 | 32.58 | | | | | | |
| E | 10 | 8.2 | 6.90 | 32.58 | | | | | | |

DATABASE LISTING FOR CRUISE 84-02. PAGE 5

* - Indicates that data is from an electronic sensor.

| STN NO. | BOT NO. | DEPTH (dbar) | *TEMP (deg C) | *SAL | CHL (mg/m3) (934) | (GF/F) | Pm | NO3 (mmol / m3) | PO4 | SiO4 |
|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 01 | 69.1 | 6.27 | 32.63 | | .44 | | | | |
| 15 | 02 | 39.2 | 6.70 | 32.62 | | .96 | | | | |
| 15 | 03 | 23.2 | 6.87 | 32.57 | | 1.02 | | | | |
| 15 | 04 | 13.9 | 6.87 | 32.57 | | .88 | | | | |
| 15 | 05 | 3.5 | 6.90 | 32.55 | | .93 | | | | |
| 16 | 01 | 69.7 | 6.63 | 32.58 | | .37 | | | | |
| 16 | 02 | 42.7 | 7.01 | 32.58 | | .57 | | | | |
| 16 | 03 | 24.3 | 7.10 | 32.55 | | .61 | | | | |
| 16 | 04 | 13.9 | 7.11 | 32.54 | | .62 | | | | |
| 16 | 05 | 1.8 | 7.14 | 32.53 | | .64 | | | | |
| 17 | 01 | 69.6 | 6.38 | 32.59 | | .42 | | | | |
| 17 | 02 | 40.1 | 6.54 | 32.59 | | .82 | | | | |
| 17 | 03 | 24.9 | 6.81 | 32.57 | | 1.12 | | | | |
| 17 | 04 | 13.0 | 6.85 | 32.55 | | .92 | | | | |
| 17 | 05 | 9.2 | 6.91 | 32.54 | | | | | | |
| 17 | 06 | 2.8 | 6.93 | 32.53 | | .85 | | | | |
| F | 01 | 203.4 | 4.06 | 33.81 | | | | 35.0 | 2.73 | 52.9 |
| F | 02 | 152.5 | 4.22 | 33.76 | | | | 32.2 | 2.65 | 57.2 |
| F | 03 | 124.2 | 4.35 | 33.70 | | | | 30.0 | 2.44 | 51.2 |
| F | 04 | 101.9 | 4.72 | 33.59 | | | | 21.6 | 2.20 | 33.7 |
| F | 05 | 70.2 | 6.22 | 32.64 | | | | 13.2 | 1.33 | 19.9 |
| F | 06 | 41.9 | 6.50 | 32.59 | .53 | | .66 | 12.6 | 1.33 | 19.4 |
| F | 07 | 42.5 | 6.51 | 32.58 | .50 | | | | | |
| F | 08 | 26.2 | 6.84 | 32.57 | | | | 12.0 | 1.30 | 18.4 |
| F | 09 | 9.9 | 6.94 | 32.54 | .71 | | 1.44 | 11.8 | 1.26 | 19.6 |
| F | 10 | 7.5 | 6.95 | 32.53 | .64 | | | | | |
| G | 01 | 68.9 | 6.37 | 32.60 | | .44 | | | | |
| G | 02 | 22.6 | 6.87 | 32.57 | | .82 | | | | |
| H | 01 | 74.7 | 6.22 | 32.61 | | .39 | | | | |
| H | 02 | 42.5 | 6.50 | 32.57 | .62 | | .89 | | | |
| H | 03 | 40.1 | 6.53 | 32.57 | .61 | | | | | |
| H | 04 | 24.5 | 6.85 | 32.58 | | 1.04 | | | | |
| H | 05 | 9.7 | 6.92 | 32.54 | .84 | | 1.26 | | | |
| H | 06 | 9.6 | 6.92 | 32.55 | .90 | | | | | |
| I | 01 | 60.0 | | | | .66 | | | | |
| I | 02 | 40.0 | | | | .88 | | | | |
| I | 03 | 23.0 | | | | .80 | | | | |
| I | 04 | 15.0 | | | | .79 | | | | |
| I | 05 | 8.0 | | | .67 | .84 | | | | |
| I | 06 | 1.0 | | | | .82 | | | | |
| J | 01 | 40.0 | | | .56 | | | | | |
| J | 02 | 8.0 | | | .72 | 1.00 | | | | |

DATABASE LISTING FOR CRUISE 84-02. PAGE 6
* - Indicates that data is from an electronic sensor.

| STN NO. | BOT NO. | DEPTH (dbar) | *TEMP (deg C) | *SAL | CHL (mg/m3) (934) | CHL (mg/m3) (GF/F) | Pm | NO3 (mmol / m3) | PO4 (mmol / m3) | SiO4 (mmol / m3) |
|---|---|---|---|---|---|---|---|---|---|---|
| K | 01 | 60.0 | | | | .42 | | | | |
| K | 02 | 36.0 | | | .76 | 1.00 | .71 | | | |
| K | 03 | 20.0 | | | | .99 | | | | |
| K | 04 | 14.0 | | | | .86 | | | | |
| K | 05 | 7.0 | | | .77 | .96 | 1.06 | | | |
| K | 06 | 1.0 | | | | 1.04 | | | | |
| L | 01 | 60.0 | | | | .61 | | | | |
| L | 02 | 36.0 | | | .73 | | 1.34 | | | |
| L | 03 | 20.0 | | | | 1.11 | | | | |
| L | 04 | 7.0 | | | .75 | | 1.69 | | | |
| M | 01 | 60.0 | | | | .63 | | | | |
| M | 02 | 36.0 | | | .73 | | 1.88 | | | |
| M | 03 | 20.0 | | | | .94 | | | | |
| M | 04 | 7.0 | | | .75 | | 1.83 | | | |
| N | 01 | 60.0 | | | | .80 | | | | |
| N | 02 | 36.0 | | | .78 | | | | | |
| N | 03 | 20.0 | | | | 1.01 | | | | |
| N | 04 | 7.0 | | | .70 | | 2.12 | | | |
| O | 01 | 60.0 | | | | .48 | | | | |
| O | 02 | 36.0 | | | .83 | | .95 | | | |
| O | 03 | 20.0 | | | | 1.04 | | | | |
| O | 04 | 7.0 | | | .93 | | 1.42 | | | |
| P | 01 | 60.0 | | | | .45 | | | | |
| P | 02 | 36.0 | | | .77 | | 2.01 | | | |
| P | 03 | 20.0 | | | | 1.03 | | | | |
| P | 04 | 7.0 | | | .80 | | 1.95 | | | |
| Q | 01 | 60.0 | | | | .61 | | | | |
| Q | 02 | 36.0 | | | .87 | | | | | |
| Q | 03 | 20.0 | | | | 1.08 | | | | |
| Q | 04 | 7.0 | | | .84 | | | | | |
| R | 01 | 60.0 | | | | .43 | | | | |
| R | 02 | 36.0 | | | 1.04 | | .83 | | | |
| R | 03 | 20.0 | | | | 1.13 | | | | |
| R | 04 | 7.0 | | | 1.07 | | .72 | | | |
| S | 01 | 60.0 | | | | .53 | | 12.3 | 1.35 | 19.4 |
| S | 02 | 36.0 | | | .92 | | 1.55 | 11.8 | 1.30 | 19.6 |
| S | 03 | 20.0 | | | | 1.04 | | 11.5 | 1.30 | 19.0 |
| S | 04 | 7.0 | | | .93 | | 1.21 | 11.9 | 1.32 | 19.4 |
| S | 05 | 1.0 | | | | | | 11.9 | 1.31 | 19.6 |
| T | 01 | 36.0 | | | .79 | | 1.53 | | | |
| T | 02 | 7.0 | | | .85 | | 1.54 | | | |
| U | 01 | 36.0 | | | .70 | | 1.85 | | | |

DATABASE LISTING FOR CRUISE 84-02. PAGE 7

* - Indicates that data is from an electronic sensor.

| STN NO. | BOT NO. | DEPTH (dbar) | *TEMP (deg C) | *SAL | CHL (mg/m3) (934) | CHL (mg/m3) (GF/F) | Pm | NO3 (mmol / m3) | PO4 (mmol / m3) | SiO4 (mmol / m3) |
|---|---|---|---|---|---|---|---|---|---|---|
| U | 02 | 7.0 | | | .70 | | 1.63 | | | |
| 19 | 01 | 61.5 | 6.33 | 32.60 | .37 | .38 | | | | |
| 19 | 02 | 62.5 | 6.32 | 32.60 | | | | | | |
| 19 | 03 | 11.5 | 7.04 | 32.55 | .37 | .52 | | | | |
| 19 | 04 | 12.2 | 7.04 | 32.55 | | | | | | |
| 19 | 05 | 10.5 | 7.04 | 32.55 | | | | | | |
| 19 | 06 | 11.0 | 7.04 | 32.55 | | | | | | |
| 19 | 07 | 6.2 | 7.04 | 32.54 | .34 | .52 | | | | |
| 19 | 08 | 6.5 | 7.04 | 32.54 | | | | | | |
| 20 | 01 | 254.4 | 4.30 | 33.88 | | | | 37.4 | 2.90 | 66.6 |
| 20 | 02 | 199.6 | 4.57 | 33.83 | | | | 31.8 | 2.49 | 57.9 |
| 20 | 03 | 150.8 | 4.85 | 33.81 | | | | 32.9 | 2.52 | 57.0 |
| 20 | 04 | 122.3 | 4.90 | 33.75 | | | | 30.7 | 2.32 | 50.6 |
| 20 | 05 | 99.1 | 4.74 | 33.61 | | | | 28.6 | 2.17 | 44.1 |
| 20 | 06 | 78.8 | 6.34 | 32.63 | | .30 | | 13.6 | 1.38 | 20.0 |
| 20 | 07 | 59.9 | 7.01 | 32.53 | | | | 10.9 | 1.26 | 16.8 |
| 20 | 08 | 37.1 | 7.09 | 32.55 | .27 | | | 11.2 | 1.27 | 17.0 |
| 20 | 09 | 18.2 | 7.09 | 32.55 | .22 | | | 10.8 | 1.27 | 16.8 |
| 20 | 10 | 5.3 | 7.08 | 32.54 | | .28 | | 11.2 | 1.26 | 17.7 |
| 21A | 01 | 252.8 | 4.25 | 33.90 | | | | 37.9 | 2.93 | 47.9 |
| 21A | 02 | 194.7 | 4.54 | 33.86 | | | | 35.7 | 2.77 | 53.0 |
| 21A | 03 | 146.6 | 4.89 | 33.83 | | | | 32.4 | 2.37 | 46.4 |
| 21A | 04 | 99.5 | 4.81 | 33.63 | | | | 25.1 | 2.02 | 38.1 |
| 21A | 05 | 73.3 | 6.34 | 32.59 | | | | 12.6 | 1.38 | 19.0 |
| 21A | 06 | 50.9 | 7.12 | 32.55 | | | | 10.4 | 1.12 | 16.8 |
| 21A | 07 | 35.6 | 7.17 | 32.54 | .26 | | 2.11 | 10.9 | 1.17 | 17.5 |
| 21A | 08 | 35.5 | 7.17 | 32.55 | | | | | | |
| 21A | 09 | 11.9 | 7.17 | 32.55 | .26 | | | 9.8 | 1.25 | 15.3 |
| 21A | 10 | 10.6 | 7.17 | 32.55 | | | | | | |
| P8 | 01 | 508.0 | | | | | | | | |
| P6 | 01 | 506.4 | | | | | | | | |
| P5 | 01 | 507.9 | | | | | | | | |
| P4 | 01 | 503.9 | | | | | | | | |
| P3 | 01 | 469.3 | | | | | | | | |
| P2 | 01 | 62.2 | | | .09 | | | | | |
| P1 | 01 | 36.3 | | | .58 | | | | | |
| P1 | 02 | 14.5 | | | 1.97 | | | | | |

DATA SECTION 4

Primary productivity data

Cruise: 84-02 Date: 84.05.12
Station: 1-4 Time: 0702 (LAT)
0942 (PDT)
Depth: 41.2 m
Chlor a: 0.4 mg.m-3

Parameter estimates: Derived parameters:

Ps = 2.14 Pm = 1.71
a = 0.024 Im = 264.6
b = 0.001 Ik = 72.6
Ib = 1.59E+03

n = 19 r = 0.932 (15 d.f.)

Cruise: 84-02 Date: 84.05.12
Station: 1-8 Time: 0702 (LAT)
0942 (PDT)
Depth: 7.4 m
Chlor a: 0.3 mg.m-3

Parameter estimates: Derived parameters:

Ps = 5.39 Pm = 3.53
a = 0.013 Im = 869.8
b = 0.002 Ik = 271.1
Ib = 2.97E+03

n = 20 r = 0.967 (16 d.f.)

Cruise: 84-02 Date: 84.05.12
Station: 3B-6 Time: 1220 (LAT)
1510 (PDT)
Depth: 41.4 m
Chlor a: 0.3 mg.m-3

Parameter estimates: Derived parameters:

Ps = 1.94 Pm = 1.68
a = 0.017 Im = 401.5
b = 0.001 Ik = 100.2
Ib = 3.62E+03

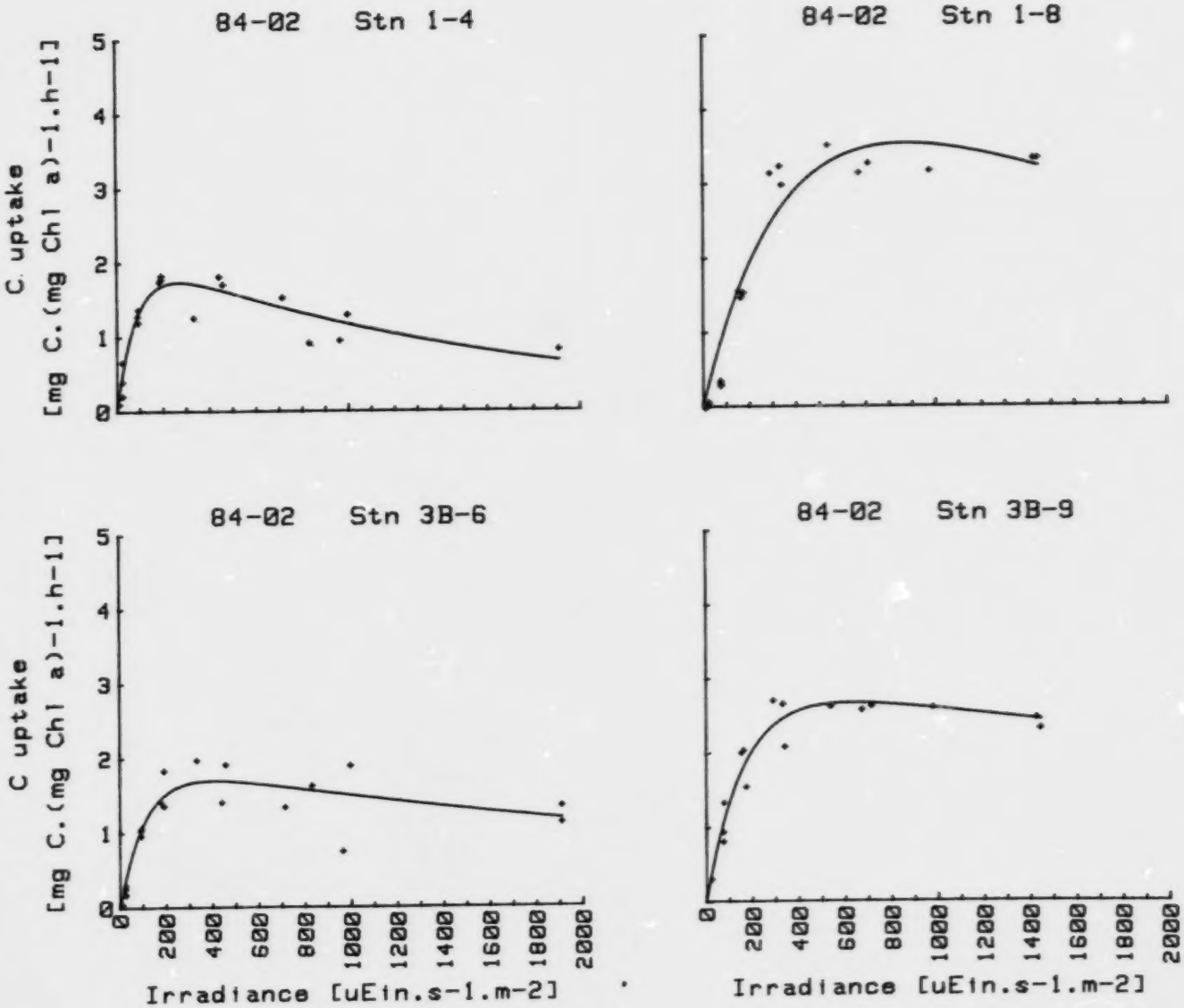
n = 20 r = 0.904 (16 d.f.)

Cruise: 84-02 Date: 84.05.12
Station: 3B-9 Time: 1220 (LAT)
1510 (PDT)
Depth: 9.0 m
Chlor a: 0.3 mg.m-3

Parameter estimates: Derived parameters:

Ps = 2.97 Pm = 2.65
a = 0.018 Im = 605.1
b = 0.000 Ik = 144.3
Ib = 6.64E+03

n = 16 r = 0.953 (12 d.f.)


84-02 Stn 1-4
84-02 Stn 1-8
84-02 Stn 3B-6
84-02 Stn 3B-9
C uptake
[mg C.(mg Chl a)-1.h-1]
Irradiance [uEin.s-1.m-2]
0
1
2
3
4
5
200
400
600
800
1000
1200
1400
1600
1800
2000

Cruise: 84-02 Date: 84.05.12
Station: 5-3 Time: 1719 (LAT)
1959 (PDT)
Depth: 40.9 m
Chlor a: 0.5 mg.m-3

Parameter estimates: Derived parameters:

| | | | |
|---|---|---|---|
| Ps = | 2.39 | Pm = | 2.1 |
| a = | 0.016 | Im = | 573.9 |
| b = | 0.000 | Ik = | 134.9 |
| | | Ib = | 6.70E+03 |

n = 19 r = 0.961 (15 d.f.)

Cruise: 84-02 Date: 84.05.13
Station: 6B-6 Time: 2252 (LAT)
0132 (PDT)
Depth: 40.1 m
Chlor a: 0.6 mg.m-3

Parameter estimates: Derived parameters:

| | | | |
|---|---|---|---|
| Ps = | 1.70 | Pm = | 1.33 |
| a = | 0.013 | Im = | 380.6 |
| b = | 0.001 | Ik = | 106.3 |
| | | Ib = | 2.12E+03 |

n = 20 r = 0.874 (16 d.f.)

Cruise: 84-02 Date: 84.05.13
Station: 6B-9 Time: 2252 (LAT)
0132 (PDT)
Depth: 9.5 m
Chlor a: 0.6 mg.m-3

Parameter estimates: Derived parameters:

| | | | |
|---|---|---|---|
| Ps = | 1.33 | Pm = | 1.23 |
| a = | 0.012 | Im = | 449.2 |
| b = | 0.000 | Ik = | 99.2 |
| | | Ib = | 6.90E+03 |

n = 18 r = 0.992 (14 d.f.)

84-02 Stn 5-3
C uptake
[mg C.(mg Chl a)-1.h-1]
0
1
2
3


84-02 Stn 6B-6
C uptake
[mg C.(mg Chl a)-1.h-1]
0
1
2
3
0
200
400
600
800
1000
1200
1400
1600
1800
2000
Irradiance [uEin.s-1.m-2]


84-02 Stn 6B-9
0
200
400
600
800
1000
1200
1400
1600
1800
2000
Irradiance [uEin.s-1.m-2]

Cruise: 84-02 Date: 84.05.13
Station: 8B-6 Time: 0508 (LAT)
0748 (PDT)
Depth: 41.2 m
Chlor a: 0.7 mg.m-3

Parameter estimates: Derived parameters:

Ps = 2.48 Pm = 1.7
a = 0.012 Im = 458.0
b = 0.001 Ik = 139.9
Ib = 1.72E+03

n = 20 r = 0.792 (16 d.f.)

Cruise: 84-02 Date: 84.05.13
Station: 11-6 Time: 1138 (LAT)
1418 (PDT)
Depth: 40.9 m
Chlor a: 0.5 mg.m-3

Parameter estimates: Derived parameters:

Ps = 2.65 Pm = 2.22
a = 0.015 Im = 570.9
b = 0.001 Ik = 149.4
Ib = 4.20E+03

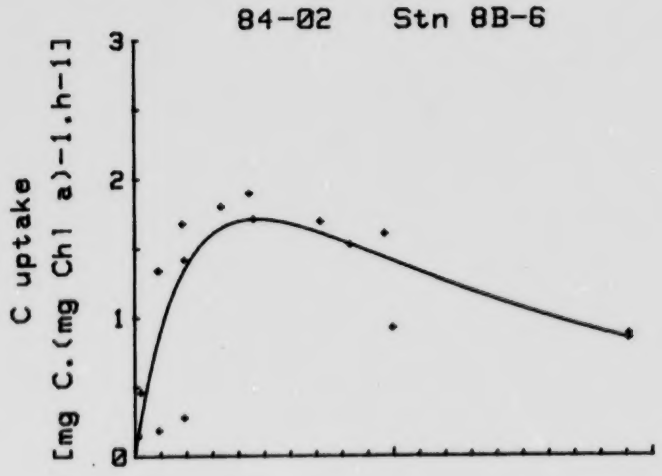
n = 17 r = 0.988 (13 d.f.)

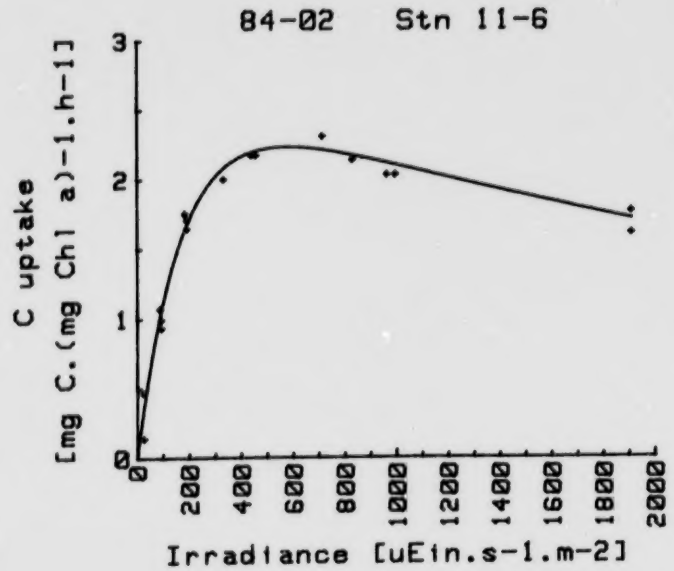
Cruise: 84-02 Date: 84.05.13
Station: 11-9 Time: 1138 (LAT)
1418 (PDT)
Depth: 8.1 m
Chlor a: 0.5 mg.m-3

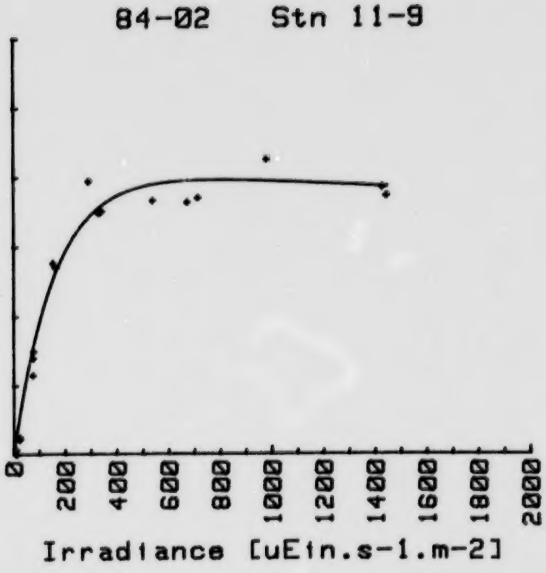
Parameter estimates: Derived parameters:

Ps = 2.07 Pm = 1.96
a = 0.013 Im = 762.3
b = 0.000 Ik = 155.2
Ib = 1.70E+04

n = 18 r = 0.984 (14 d.f.)


84-02 Stn 8B-6
C uptake
[mg C.(mg Chl a)-1.h-1]
0
1
2
3


84-02 Stn 11-6
C uptake
[mg C.(mg Chl a)-1.h-1]
0
1
2
3
0
200
400
600
800
1000
1200
1400
1600
1800
2000
Irradiance [uEin.s-1.m-2]


84-02 Stn 11-9
0
200
400
600
800
1000
1200
1400
1600
1800
2000
Irradiance [uEin.s-1.m-2]

Cruise: 84-02 Date: 84.05.13
Station: 14B-9 Time: 1913 (LAT)
2153 (PDT)
Depth: 9.6 m
Chlor a: 0.6 mg.m-3

Parameter estimates: Derived parameters:

Ps = 1.41 Pm = 1.2
a = 0.011 Im = 378.1
b = 0.001 Ik = 101.2
Ib = 2.52E+03

n = 20 r = 0.808 (16 d.f.)

Cruise: 84-02 Date: 84.05.14
Station: A-5/6 Time: 2311 (LAT)
0151 (PDT)
Depth: 42.3 m
Chlor a: 0.8 mg.m-3

Parameter estimates: Derived parameters:

Ps = 0.93 Pm = 0.76
a = 0.012 Im = 243.3
b = 0.001 Ik = 65.5
Ib = 1.58E+03

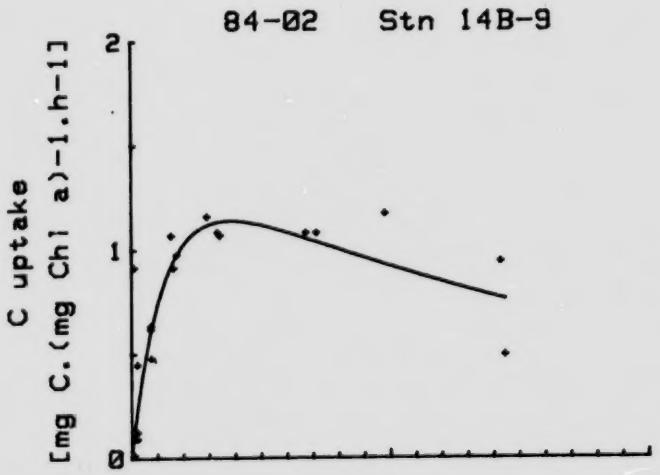
n = 21 r = 0.951 (17 d.f.)

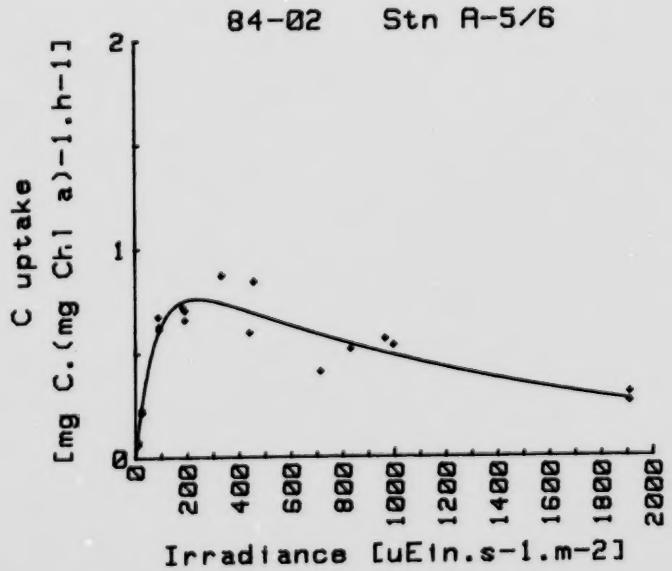
Cruise: 84-02 Date: 84.05.14
Station: A-8/9 Time: 2312 (LAT)
0152 (PDT)
Depth: 11.0 m
Chlor a: 0.6 mg.m-3

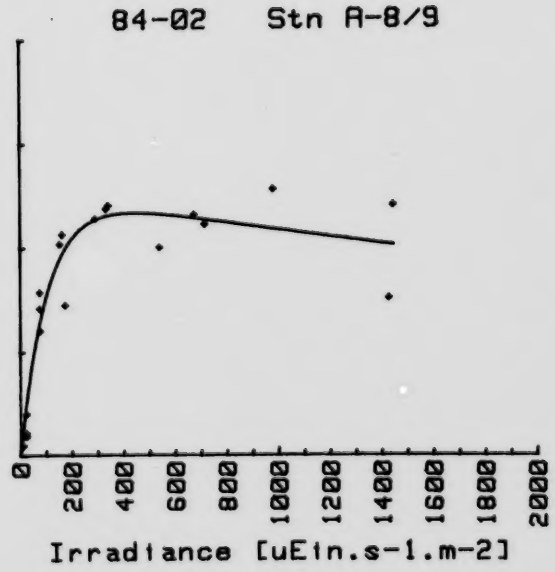
Parameter estimates: Derived parameters:

Ps = 1.27 Pm = 1.17
a = 0.012 Im = 447.9
b = 0.000 Ik = 99.8
Ib = 6.61E+03

n = 20 r = 0.948 (16 d.f.)


84-02 Stn 14B-9
C uptake
[mg C.(mg Chl a)-1.h-1]
2
1
0


84-02 Stn A-5/6
C uptake
[mg C.(mg Chl a)-1.h-1]
2
1
0
0
200
400
600
800
1000
1200
1400
1600
1800
2000
Irradiance [uEin.s-1.m-2]


84-02 Stn A-8/9
0
200
400
600
800
1000
1200
1400
1600
1800
2000
Irradiance [uEin.s-1.m-2]

Cruise: 84-02 Date: 84.05.14
Station: B-3/4 Time: 0216 (LAT)
0456 (PDT)
Depth: 41.7 m
Chlor a: 0.7 mg.m-3

Parameter estimates: Derived parameters:

| | | | |
|---|---|---|---|
| Ps = | 0.85 | Pm = | 0.77 |
| a = | 0.015 | Im = | 232.7 |
| b = | 0.000 | Ik = | 52.3 |
| | | Ib = | 3.31E+03 |

n = 18 r = 0.954 (14 d.f.)

Cruise: 84-02 Date: 84.05.14
Station: B-6 Time: 0217 (LAT)
0457 (PDT)
Depth: 9.8 m
Chlor a: 0.6 mg.m-3

Parameter estimates: Derived parameters:

| | | | |
|---|---|---|---|
| Ps = | 1.99 | Pm = | 1.63 |
| a = | 0.013 | Im = | 470.5 |
| b = | 0.001 | Ik = | 125.9 |
| | | Ib = | 3.15E+03 |

n = 20 r = 0.989 (16 d.f.)

Cruise: 84-02 Date: 84.05.14
Station: C-3 Time: 0512 (LAT)
0752 (PDT)
Depth: 40.9 m
Chlor a: 0.7 mg.m-3

Parameter estimates: Derived parameters:

| | | | |
|---|---|---|---|
| Ps = | 2.65 | Pm = | 2.08 |
| a = | 0.030 | Im = | 246.5 |
| b = | 0.002 | Ik = | 68.7 |
| | | Ib = | 1.38E+03 |

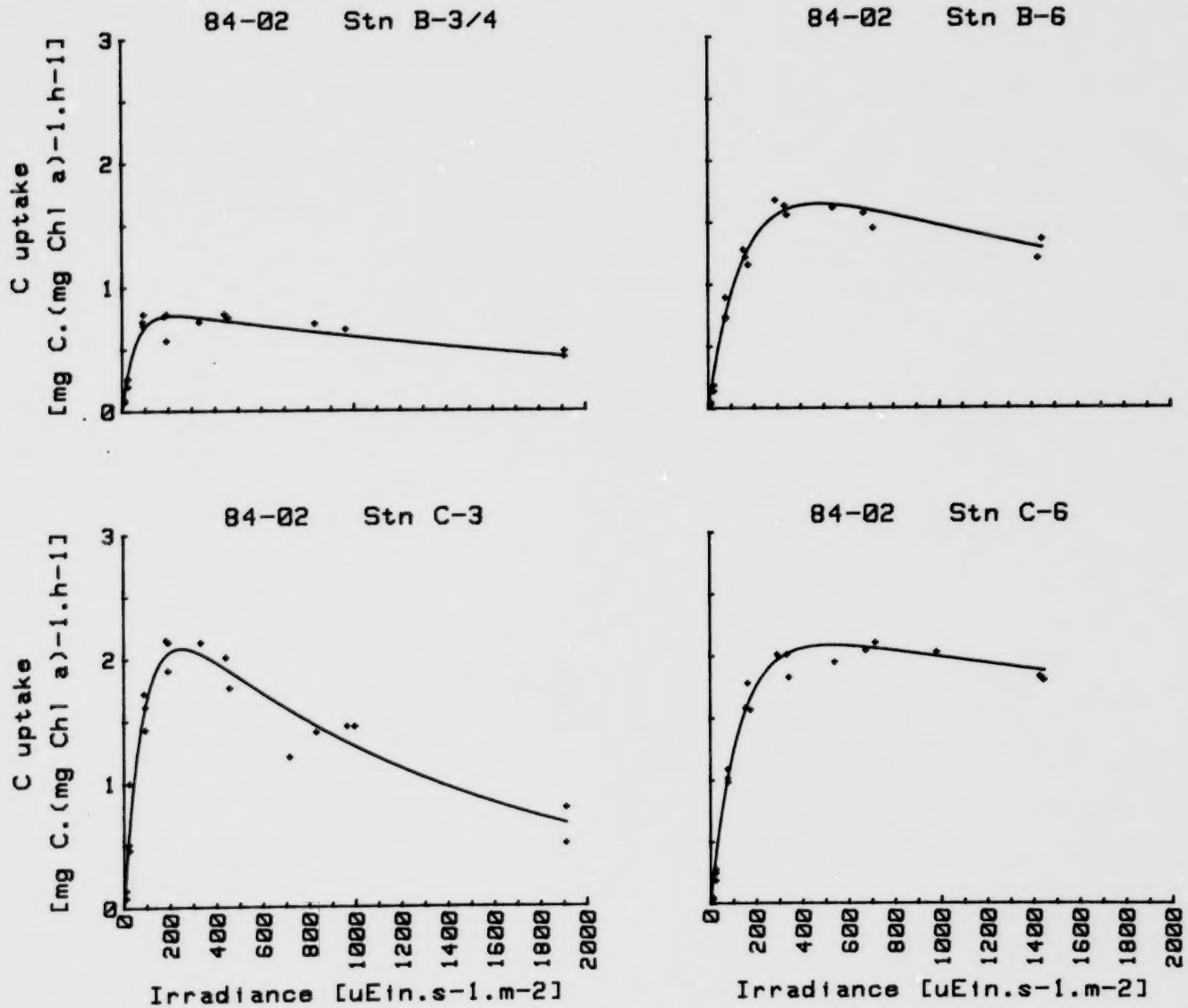
n = 20 r = 0.962 (16 d.f.)

Cruise: 84-02 Date: 84.05.14
Station: C-6 Time: 0514 (LAT)
0754 (PDT)
Depth: 8.8 m
Chlor a: 0.7 mg.m-3

Parameter estimates: Derived parameters:

| | | | |
|---|---|---|---|
| Ps = | 2.27 | Pm = | 2.06 |
| a = | 0.018 | Im = | 512.7 |
| b = | 0.000 | Ik = | 117.4 |
| | | Ib = | 6.72E+03 |

n = 21 r = 0.991 (17 d.f.)


84-02 Stn B-3/4
84-02 Stn B-6
84-02 Stn C-3
84-02 Stn C-6
C uptake
[mg C.(mg Chl a)-1.h-1]
Irradiance [uEin.s-1.m-2]
0
1
2
3
200
400
600
800
1000
1200
1400
1600
1800
2000

Cruise: 84-02 Date: 84.05.14
Station: D-3 Time: 0824 (LAT)
1104 (PDT)
Depth: 40.2 m
Chlor a: 0.9 mg.m-3

Parameter estimates: Derived parameters:

Ps = 1.54 Pm = 1.20
a = 0.019 Im = 224.8
b = 0.001 Ik = 63.1
Ib = 1.22E+03

n = 20 r = 0.886 (16 d.f.)

Cruise: 84-02 Date: 84.05.14
Station: D-7 Time: 0826 (LAT)
1106 (PDT)
Depth: 8.3 m
Chlor a: 0.8 mg.m-3

Parameter estimates: Derived parameters:

Ps = 2.13 Pm = 1.87
a = 0.014 Im = 561.0
b = 0.000 Ik = 137.7
Ib = 5.42E+03

n = 21 r = 0.948 (17 d.f.)

Cruise: 84-02 Date: 84.05.14
Station: E-5 Time: 1108 (LAT)
1348 (PDT)
Depth: 39.1 m
Chlor a: 0.8 mg.m-3

Parameter estimates: Derived parameters:

Ps = 2.99 Pm = 2.47
a = 0.023 Im = 400.0
b = 0.001 Ik = 106.3
Ib = 2.76E+03

n = 21 r = 0.959 (17 d.f.)

Cruise: 84-02 Date: 84.05.14
Station: E-8 Time: 1109 (LAT)
1349 (PDT)
Depth: 8.0 m
Chlor a: 0.8 mg.m-3

Parameter estimates: Derived parameters:

Ps = 2.23 Pm = 1.92
a = 0.011 Im = 717.2
b = 0.000 Ik = 180.6
Ib = 6.21E+03

n = 21 r = 0.959 (17 d.f.)

84-02 Stn D-7
84-02 Stn E-8
84-02 Stn D-3
84-02 Stn E-5
C uptake
[mg C.(mg Chl a)-1.h-1]
Irradiance [uEin.s-1.m-2]
0
200
400
600
800
1000
1200
1400
1600
1800
2000
1
2
3

Cruise: 84-02 Date: 84.05.16
Station: F-6/7 Time: 2318 (LAT)
0159 (PDT)
Depth: 42.2 m
Chlor a: 0.7 mg.m-3

| Parameter estimates: | | Derived parameters: | |
|---|---|---|---|
| Ps = | 0.80 | Pm = | 0.66 |
| a = | 0.014 | Im = | 176.0 |
| b = | 0.001 | Ik = | 47.3 |
| | | Ib = | 1.15E+03 |

n = 21 r = 0.940 (17 d.f.)

Cruise: 84-02 Date: 84.05.16
Station: F-9/10 Time: 2318 (LAT)
0159 (PDT)
Depth: 8.7 m
Chlor a: 0.9 mg.m-3

| Parameter estimates: | | Derived parameters: | |
|---|---|---|---|
| Ps = | 1.59 | Pm = | 1.44 |
| a = | 0.012 | Im = | 542.4 |
| b = | 0.000 | Ik = | 124.8 |
| | | Ib = | 6.95E+03 |

n = 21 r = 0.983 (17 d.f.)

Cruise: 84-02 Date: 84.05.16
Station: H-2/3 Time: 0322 (LAT)
0603 (PDT)
Depth: 41.3 m
Chlor a: 0.8 mg.m-3

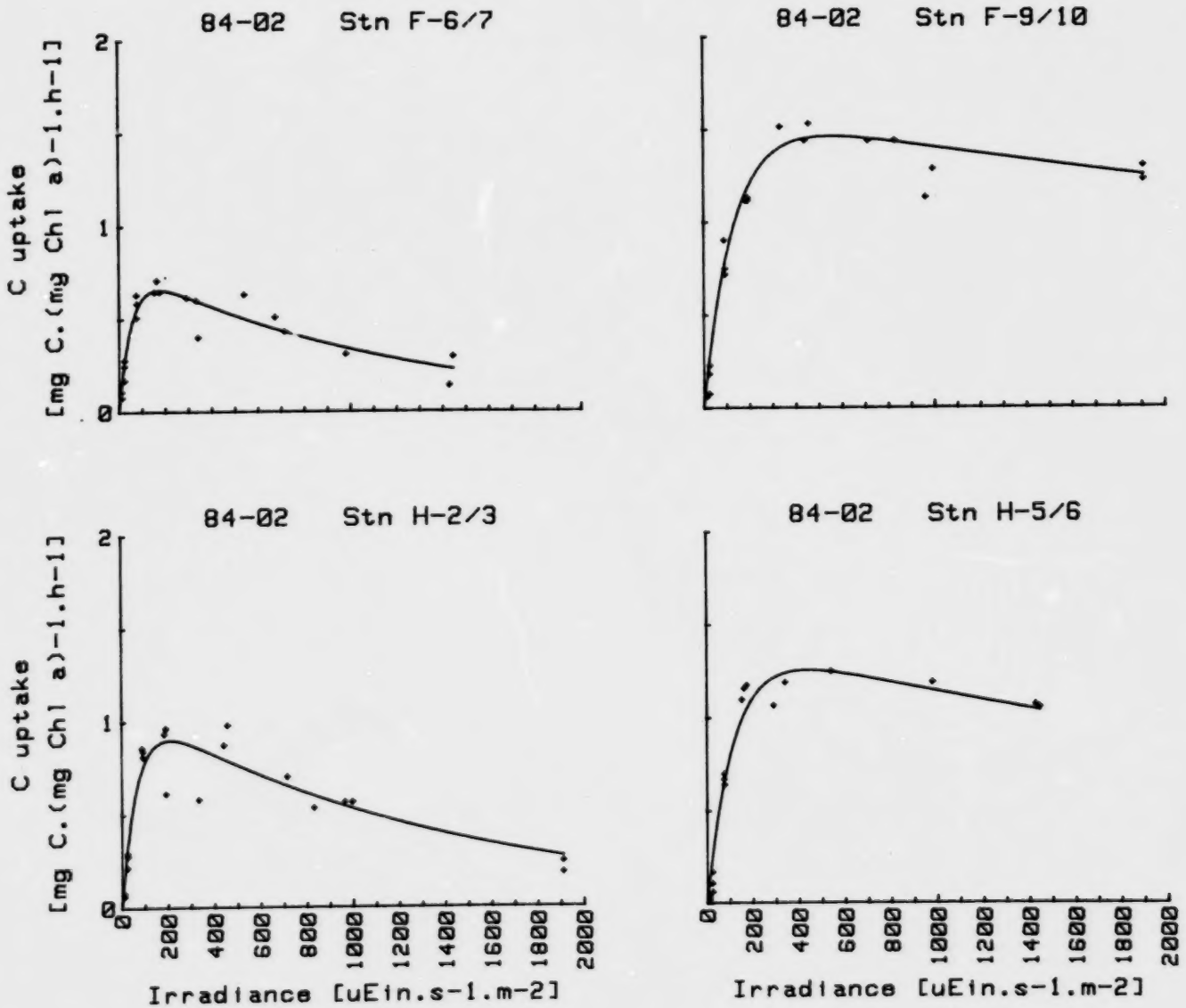
| Parameter estimates: | | Derived parameters: | |
|---|---|---|---|
| Ps = | 1.10 | Pm = | 0.89 |
| a = | 0.016 | Im = | 210.7 |
| b = | 0.001 | Ik = | 57.0 |
| | | Ib = | 1.35E+03 |

n = 21 r = 0.923 (17 d.f.)

Cruise: 84-02 Date: 84.05.16
Station: H-5/6 Time: 0322 (LAT)
0603 (PDT)
Depth: 9.7 m
Chlor a: 1.1 mg.m-3

| Parameter estimates: | | Derived parameters: | |
|---|---|---|---|
| Ps = | 1.41 | Pm = | 1.26 |
| a = | 0.012 | Im = | 440.9 |
| b = | 0.000 | Ik = | 104.0 |
| | | Ib = | 5.06E+03 |

n = 18 r = 0.979 (14 d.f.)


84-02 Stn F-6/7
84-02 Stn F-9/10
84-02 Stn H-2/3
84-02 Stn H-5/6
C uptake
[mg C.(mg Chl a)-1.h-1]
Irradiance [uEin.s-1.m-2]
0
1
2
200
400
600
800
1000
1200
1400
1600
1800
2000

Cruise: 84-02 Date: 84.05.19
Station: K-2 Time: 0250 (LAT)
0530 (PDT)
Depth: 36.0 m
Chlor a: 1.0 mg.m-3

| Parameter estimates: | | Derived parameters: | |
|---|---|---|---|
| Ps = | 0.81 | Pm = | 0.71 |
| a = | 0.007 | Im = | 384.7 |
| b = | 0.000 | Ik = | 95.1 |
| | | Ib = | 3.61E+03 |

n = 21 r = 0.937 (17 d.f.)

Cruise: 84-02 Date: 84.05.19
Station: K-5 Time: 0250 (LAT)
0530 (PDT)
Depth: 7.0 m
Chlor a: 1.0 mg.m-3

| Parameter estimates: | | Derived parameters: | |
|---|---|---|---|
| Ps = | 1.45 | Pm = | 1.06 |
| a = | 0.009 | Im = | 406.4 |
| b = | 0.001 | Ik = | 119.6 |
| | | Ib = | 1.80E+03 |

n = 21 r = 0.939 (17 d.f.)

Cruise: 84-02 Date: 84.05.19
Station: L-2 Time: 0711 (LAT)
0951 (PDT)
Depth: 36.0 m
Chlor a: 1.0 mg.m-3

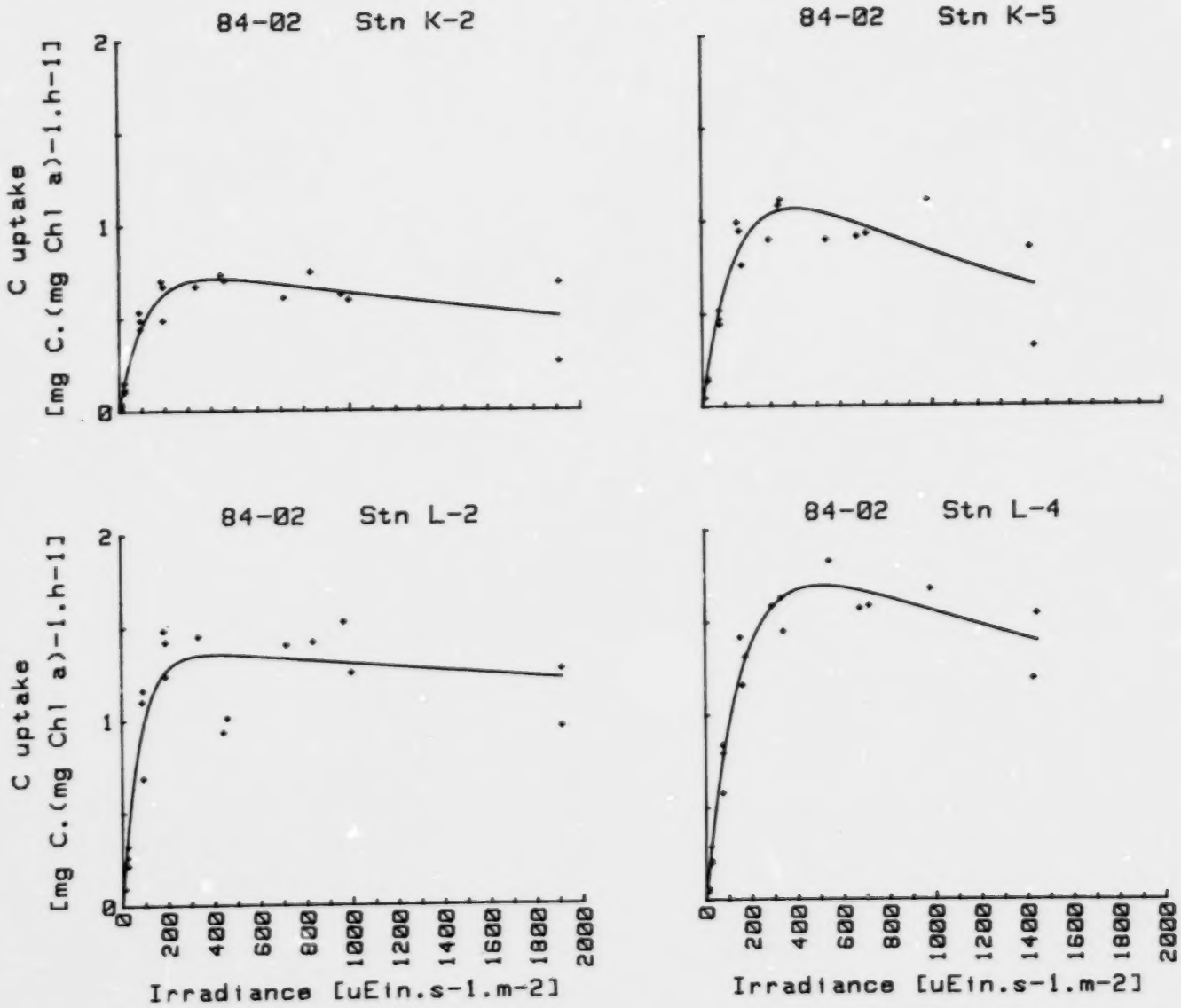
| Parameter estimates: | | Derived parameters: | |
|---|---|---|---|
| Ps = | 1.40 | Pm = | 1.34 |
| a = | 0.018 | Im = | 373.7 |
| b = | 0.000 | Ik = | 73.0 |
| | | Ib = | 1.02E+04 |

n = 21 r = 0.924 (17 d.f.)

Cruise: 84-02 Date: 84.05.19
Station: L-4 Time: 0711 (LAT)
0951 (PDT)
Depth: 7.0 m
Chlor a: 1.0 mg.m-3

| Parameter estimates: | | Derived parameters: | |
|---|---|---|---|
| Ps = | 2.00 | Pm = | 1.69 |
| a = | 0.013 | Im = | 510.1 |
| b = | 0.001 | Ik = | 131.8 |
| | | Ib = | 3.96E+03 |

n = 21 r = 0.982 (17 d.f.)


84-02 Stn K-2
84-02 Stn K-5
84-02 Stn L-2
84-02 Stn L-4
C uptake
[mg C.(mg Chl a)-1.h-1]
Irradiance [uEin.s-1.m-2]
0
1
2
200
400
600
800
1000
1200
1400
1600
1800
2000

Cruise: 84-02 Date: 84.05.19
Station: M-2 Time: 0907 (LAT)
1147 (PDT)
Depth: 36.0 m
Chlor a: 1.0 mg.m-3

Parameter estimates: Derived parameters:

| | | | |
|---|---|---|---|
| Ps = | 2.14 | Pm = | 1.88 |
| a = | 0.019 | Im = | 409.4 |
| b = | 0.001 | Ik = | 100.3 |
| | | Ib = | 4.00E+03 |

n = 21 r = 0.940 (17 d.f.)

Cruise: 84-02 Date: 84.05.19
Station: M-4 Time: 0907 (LAT)
1147 (PDT)
Depth: 7.0 m
Chlor a: 1.0 mg.m-3

Parameter estimates: Derived parameters:

| | | | |
|---|---|---|---|
| Ps = | 1.97 | Pm = | 1.83 |
| a = | 0.018 | Im = | 478.0 |
| b = | 0.000 | Ik = | 102.5 |
| | | Ib = | 8.38E+03 |

n = 21 r = 0.951 (17 d.f.)

Cruise: 84-02 Date: 84.05.19
Station: N-4 Time: 1221 (LAT)
1500 (PDT)
Depth: 7.0 m
Chlor a: 0.9 mg.m-3

Parameter estimates: Derived parameters:

| | | | |
|---|---|---|---|
| Ps = | 2.66 | Pm = | 2.1 |
| a = | 0.013 | Im = | 601.4 |
| b = | 0.001 | Ik = | 165.7 |
| | | Ib = | 2.55E+03 |

n = 21 r = 0.968 (17 d.f.)

84-02 Stn M-4
84-02 Stn M-2
84-02 Stn N-4
C uptake
[mg C.(mg Chl a)-1.h-1]
0
1
2
3
200
400
600
800
1000
1200
1400
1600
1800
2000
Irradiance [uEin.s-1.m-2]

Cruise: 84-02 Date: 84.05.19
Station: O-2 Time: 1506 (LAT)
1745 (PDT)
Depth: 36.0 m
Chlor a: 1.1 mg.m-3

| Parameter estimates: | | Derived parameters: | |
|---|---|---|---|
| Ps = | 1.20 | Pm = | 0.95 |
| a = | 0.008 | Im = | 440.8 |
| b = | 0.001 | Ik = | 122.2 |
| | | Ib = | 2.53E+03 |

n = 21 r = 0.950 (17 d.f.)

Cruise: 84-02 Date: 84.05.19
Station: O-4 Time: 1506 (LAT)
1745 (PDT)
Depth: 7.0 m
Chlor a: 1.2 mg.m-3

| Parameter estimates: | | Derived parameters: | |
|---|---|---|---|
| Ps = | 1.42 | Pm = | 1.42 |
| a = | 0.016 | Im = | 856.2 |
| b = | 0.000 | Ik = | 88.3 |
| | | Ib = | 1.42E+06 |

n = 20 r = 0.865 (16 d.f.)

Cruise: 84-02 Date: 84.05.19
Station: P-2 Time: 1806 (LAT)
2045 (PDT)
Depth: 36.0 m
Chlor a: 1.0 mg.m-3

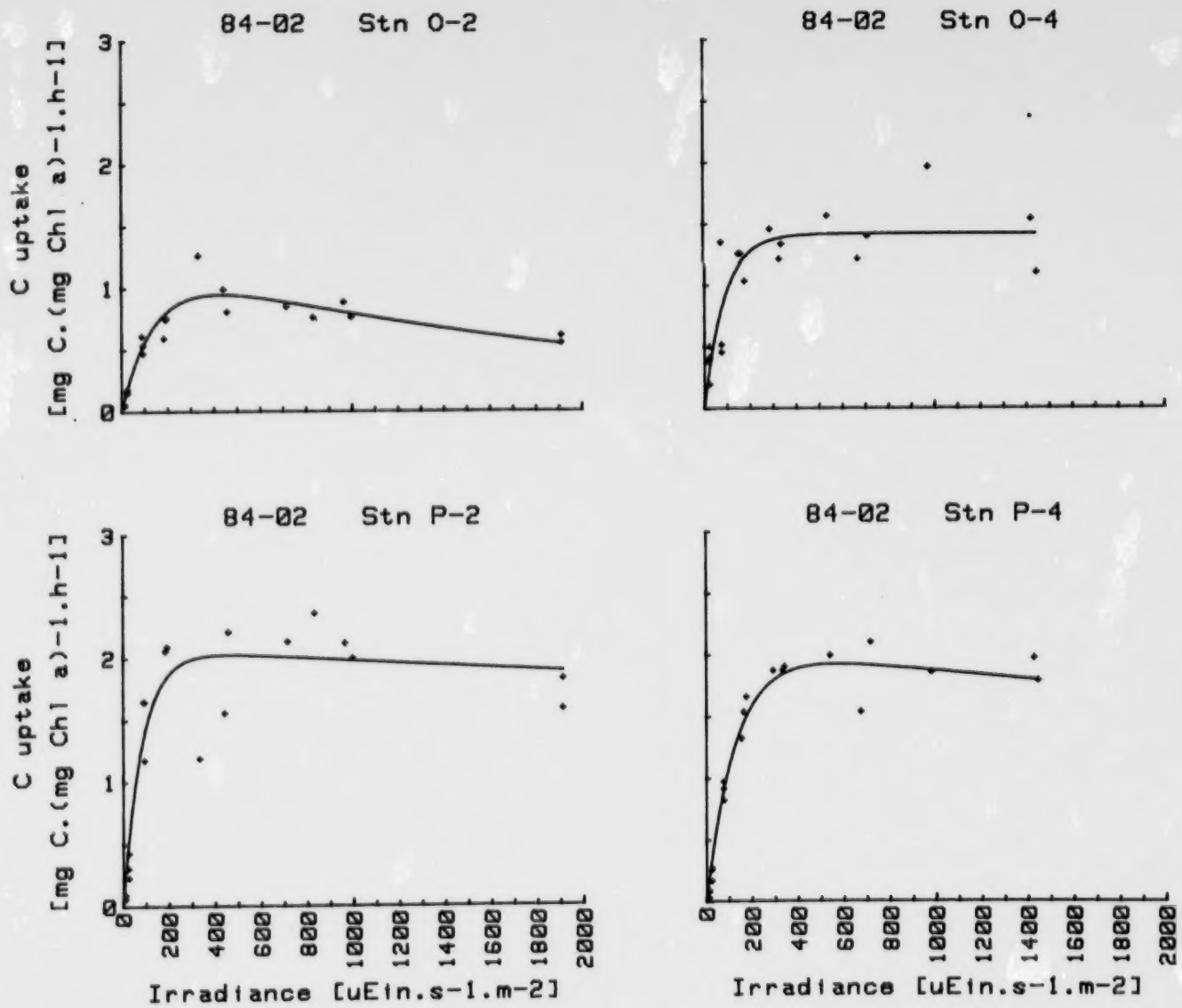
| Parameter estimates: | | Derived parameters: | |
|---|---|---|---|
| Ps = | 2.08 | Pm = | 2.01 |
| a = | 0.025 | Im = | 425.8 |
| b = | 0.000 | Ik = | 79.1 |
| | | Ib = | 1.48E+04 |

n = 19 r = 0.914 (15 d.f.)

Cruise: 84-02 Date: 84.05.19
Station: P-4 Time: 1806 (LAT)
2045 (PDT)
Depth: 7.0 m
Chlor a: 1.1 mg.m-3

| Parameter estimates: | | Derived parameters: | |
|---|---|---|---|
| Ps = | 2.06 | Pm = | 1.95 |
| a = | 0.016 | Im = | 586.0 |
| b = | 0.000 | Ik = | 120.7 |
| | | Ib = | 1.24E+04 |

n = 21 r = 0.984 (17 d.f.)


84-02 Stn O-2
84-02 Stn O-4
84-02 Stn P-2
84-02 Stn P-4
C uptake
[mg C.(mg Chl a)-1.h-1]
Irradiance [uEin.s-1.m-2]
0
1
2
3
200
400
600
800
1000
1200
1400
1600
1800
2000

Cruise: 84-02 Date: 84.05.20
Station: R-2 Time: 0126 (LAT)
0405 (PDT)
Depth: 36.0 m
Chlor a: 1.4 mg.m-3

Parameter estimates: Derived parameters:

Ps = 0.91 Pm = 0.83
a = 0.011 Im = 338.0
b = 0.000 Ik = 76.6
Ib = 4.64E+03

n = 20 r = 0.966 (16 d.f.)

Cruise: 84+02 Date: 84.05.20
Station: R-4 Time: 0126 (LAT)
0405 (PDT)
Depth: 7.0 m
Chlor a: 1.4 mg.m-3

Parameter estimates: Derived parameters:

Ps = 0.77 Pm = 0.72
a = 0.012 Im = 293.0
b = 0.000 Ik = 61.5
Ib = 5.68E+03

n = 21 r = 0.940 (17 d.f.)

Cruise: 84-02 Date: 84.05.20
Station: S-2 Time: 0351 (LAT)
0630 (PDT)
Depth: 36.0 m
Chlor a: 1.2 mg.m-3

Parameter estimates: Derived parameters:

Ps = 1.76 Pm = 1.55
a = 0.019 Im = 339.1
b = 0.001 Ik = 82.5
Ib = 3.41E+03

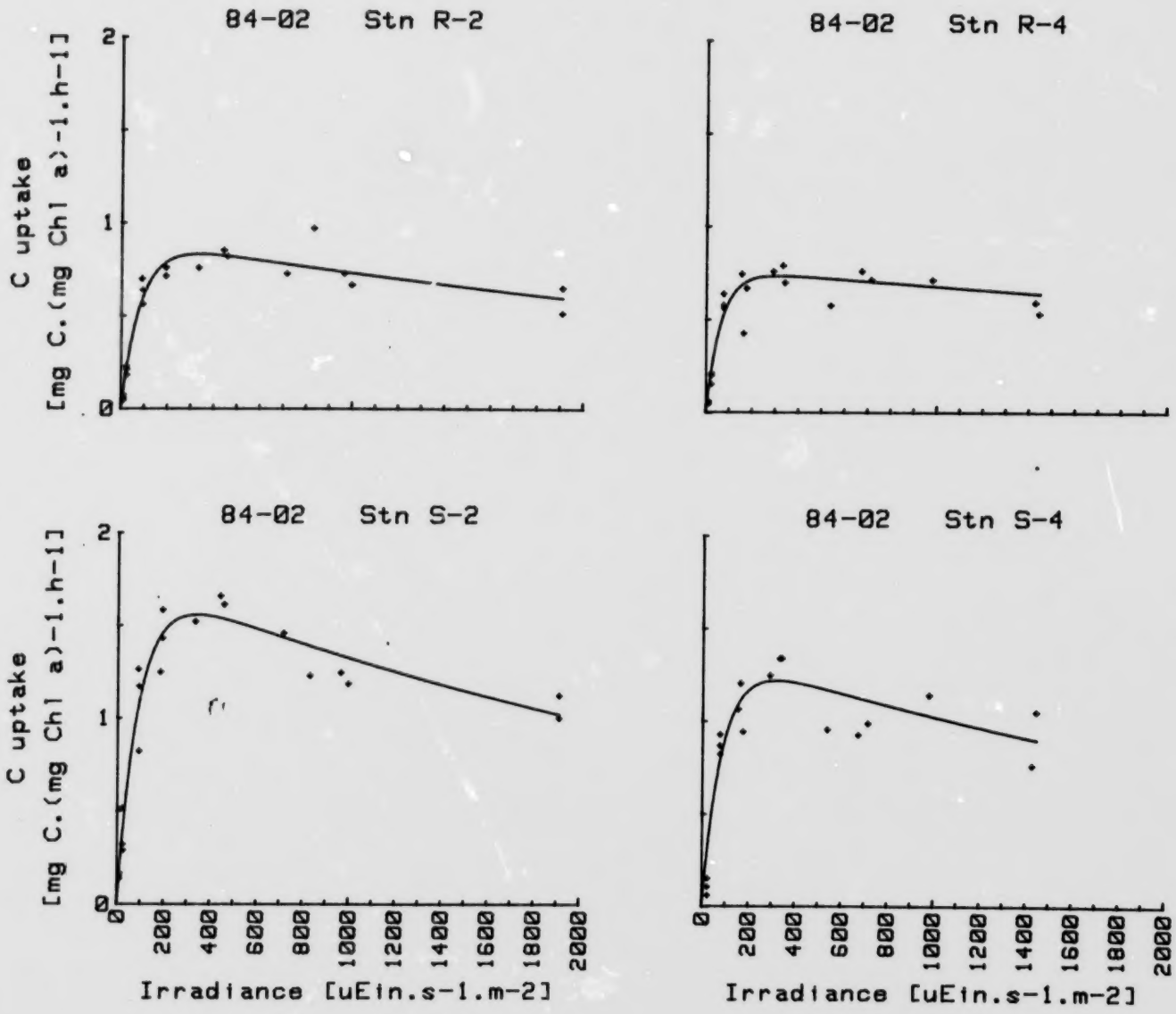
n = 21 r = 0.969 (17 d.f.)

Cruise: 84-02 Date: 84.05.20
Station: S-4 Time: 0351 (LAT)
0630 (PDT)
Depth: 7.0 m
Chlor a: 1.2 mg.m-3

Parameter estimates: Derived parameters:

Ps = 1.37 Pm = 1.21
a = 0.016 Im = 319.0
b = 0.000 Ik = 77.7
Ib = 3.19E+03

n = 18 r = 0.913 (14 d.f.)


84-02 Stn R-2
84-02 Stn R-4
84-02 Stn S-2
84-02 Stn S-4
C uptake
[mg C.(mg Chl a)-1.h-1]
Irradiance [uEin.s-1.m-2]
0
1
2
200
400
600
800
1000
1200
1400
1600
1800
2000

Cruise: 84-02 Date: 84.05.20
Station: T-1 Time: 0721 (LAT)
1000 (PDT)
Depth: 36.0 m
Chlor a: 1.0 mg.m-3

Parameter estimates: Derived parameters:

Ps = 1.58 Pm = 1.53
a = 0.018 Im = 448.1
b = 0.000 Ik = 84.0
Ib = 1.48E+04

n = 21 r = 0.955 (17 d.f.)

Cruise: 84-02 Date: 84.05.20
Station: T-2 Time: 0721 (LAT)
1000 (PDT)
Depth: 7.0 m
Chlor a: 1.1 mg.m-3

Parameter estimates: Derived parameters:

Ps = 1.74 Pm = 1.54
a = 0.014 Im = 443.4
b = 0.000 Ik = 107.2
Ib = 4.58E+03

n = 19 r = 0.953 (15 d.f.)

Cruise: 84-02 Date: 84.05.20
Station: U-1 Time: 1033 (LAT)
1312 (PDT)
Depth: 36.0 m
Chlor a: 0.9 mg.m-3

Parameter estimates: Derived parameters:

Ps = 2.39 Pm = 1.85
a = 0.014 Im = 461.7
b = 0.001 Ik = 130.3
Ib = 2.45E+03

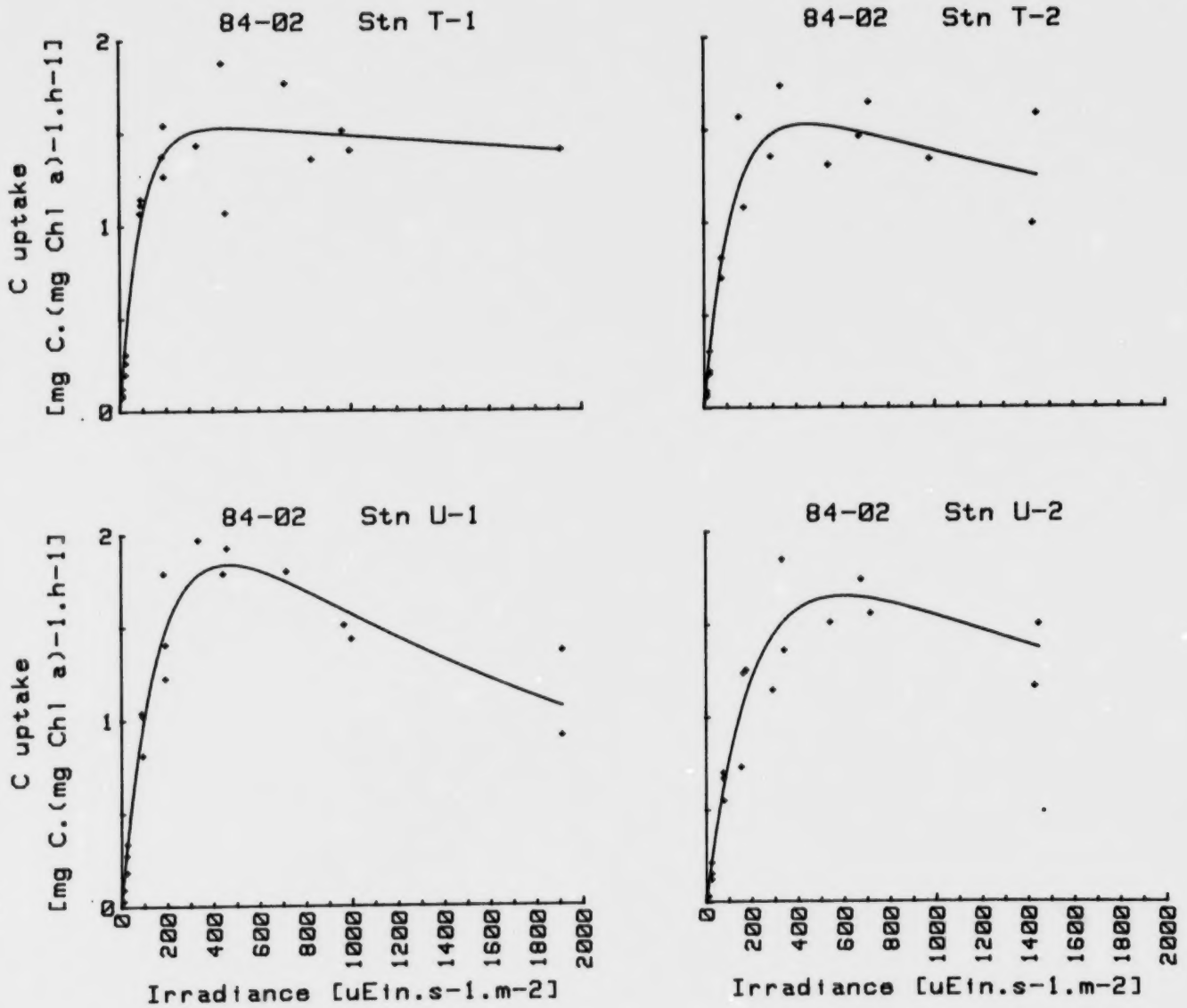
n = 20 r = 0.971 (16 d.f.)

Cruise: 84-02 Date: 84.05.20
Station: U-2 Time: 1033 (LAT)
1312 (PDT)
Depth: 7.0 m
Chlor a: 0.9 mg.m-3

Parameter estimates: Derived parameters:

Ps = 2.08 Pm = 1.63
a = 0.010 Im = 592.8
b = 0.001 Ik = 166.1
Ib = 3.25E+03

n = 20 r = 0.963 (16 d.f.)


84-02 Stn T-1
84-02 Stn T-2
84-02 Stn U-1
84-02 Stn U-2
C uptake
[mg C.(mg Chl a)-1.h-1]
Irradiance [uEin.s-1.m-2]
0
1
2
200
400
600
800
1000
1200
1400
1600
1800
2000

Cruise: 84-02 Date: 84.05.21
Station: 21A-7 Time: 0750 (LAT)
1029 (PDT)
Depth: 35.6 m
Chlor a: 0.3 mg.m-3

Parameter estimates: Derived parameters:

| | | | |
|---|---|---|---|
| Ps = | 2.49 | Pm = | 2.1 |
| a = | 0.009 | Im = | 902.1 |
| b = | 0.000 | Ik = | 232.7 |
| | | Ib = | 7.05E+03 |

n = 20 r = 0.905 (16 d.f.)

84-02 Stn 21A-7
C uptake
[mg C.(mg Chl a)-1.h-1]
0
1
2
3

DATA SECTION 5

Phytoplankton taxonomic list and abundance data

PHYTOPLANKTON TAXONOMIC LIST (WITH ABBREVIATIONS USED IN DATA RECORDS)

| | | Abbreviations in data records |
|---|---|---|
| Cyanobacteria | | |
| Nostocales | | |
| Oscillatoriaceae | | |
| | Oscillatoria spp. | oscillator spp. |
| Nostocaceae | | |
| | Anabaena spp. | anabaena spp. |
| | Nostoc sp. | nostoc sp. |
| Chrysophyta | | |
| Chrysophyceae | | |
| | Solenicola setigera | solenicola setigera |
| Ochromonadales | | |
| Ochromonadaceae | | |
| | Ochromonas spp. | ochromonas spp. |
| Dinobryaceae | | |
| | Dinobryon divergens | dinobryon divergens |
| | D. suecicum | dinobryon suecicum |
| Dictyochales | | |
| Dictyochaceae | | |
| | Dictyocha speculum | dictyocha speculum. |
| Chromulinales | | |
| Pedinellaceae | | |
| | sp.1 | chrysophyc sp.1 |
| | sp.2 | chrysophyc sp.2 |
| | Apedinella spinifera | apedinella spinifera |
| Xanthophyta | | |
| Xanthophyceae | | |
| Heterochloridales | | |
| Heterochloridaceae | | |
| | Olisthodisous sp. | olisthodis sp. |
| | O. carterae | olisthodis carterae |
| Mischococcales | | |
| Pleurochloridaceae | | |
| | Meringosphaera mediterranea | meringosph mediterranea |

| | | | | |
|---|---|---|---|---|
| Haptophyta | | | | |
| Haptophyceae | | | | |
| | spp. | haptophyce | spp. | |
| | spp. (naked. 2.5-3.5 um) | haptophyce | spp. | naked 2.5-3.5 |
| | (consists of 2 species: Imantonia sp. and Phaeocystis sp.) | | | |
| Prymnesiales | | | | |
| Prymnesiaceae | | | | |
| | Corymbellus sp | corymbellu | sp. | |
| | C. aureus | corymbellu | aureus | |
| | Chrysochromulina sp.1 | chrysochro | sp.1 | |
| | C. spp. (4-5.5 um) | chrysochro | spp. | 4-5.5 |
| | C. spp. (6-10 um) | chrysochro | spp. | 6-10 |
| Phaeocystaceae | | | | |
| | Phaeocystis pouchetii | phaeocysti | pouchetii | |
| Isochrysidales | | | | |
| Gephyrocapsaceae | | | | |
| | Coccolithus spp. | cooccolitha | spp. | |
| | Emiliania huxleyi | emiliania | huxleyi | |
| Coccosphaerales | | | | |
| Zygosphaeraceae | | | | |
| | Crystallolithus hyalinus | crystallol | hyalinus | |
| Bacillariophyta | | | | |
| Bacillariophyceae | | | | |
| Centrales | | | | |
| | spp. | centrales | spp. | |
| Cymatosiraceae | | | | |
| | Leyanella arenaria | leyanella | arenaria | |
| Corethronaceae | | | | |
| | Corethron criophilum | corethron | criophilum | |
| Leptocylindraceae | | | | |
| | Sohroederalla delicatula | schroedere | delicatula | |
| | Leptocylindrus danicus | leptocylin | danicus | |
| | L. minimus | leptocylin | minimus | |
| | L. mediterraneus | leptocylin | mediterraneu | |
| Coscinodiscaceae | | | | |
| | Melosira monoliformis | melosira | moniliformis | |
| | Paralia sulcata | paralia | sulcata | |
| | Stephanopyxis spp. | stephanopy | spp. | |
| | S. nipponica | stephanopy | nipponica | |
| | S. palmeriana | stephanopy | palmeriana | |
| | S. turris | stephanopy | turris | |

| | | |
|---|---|---|
| | Podosira spp. | podosira spp. |
| | Cyclotella sp. | cyclotella sp. |
| | C. caspia | cyclotella caspia |
| | Skeletonema costatum | skeletonem costatum |
| | Thalassiosira spp. | thalassios spp. |
| | T. gravida (syn. T. rotula) | thalassios gravida rotula |
| | T. cf. condensata | thalassios cf.condensat |
| | T. cf. elsayedii | thalassios cf.elsayedii |
| | T. angstii | thalassios angstii |
| | T. angulata | thalassios angulata |
| | T. anguste-lineata | thalassios anguste-line |
| | T. binata | thalassios binata |
| | T. tenera | thalassios tenera |
| | T. aestivalis | thalassios aestivalis |
| | T. baltica | thalassios baltica |
| | T. decipiens | thalassios decipiens |
| | T. nordenskioldii | thalassios nordenskiold |
| | T. pacifica | thalassios pacifica |
| | T. subtilis | thalassios subtilis |
| | T. lineata | thalassios lineata |
| | T. eccentrica | thalassios eccentrica |
| | T. pseudonana | thalassios pseudonana |
| | T. incerta | thalassios incerta |
| | T. mendiolana | thalassios mendiolana |
| | T. minisoula | thalassios minisoula |
| | T. conferta | thalassios conferta |
| | T. leptopus | thalassios leptopus |
| | T. constricta | thalassios constricta |
| | T. symmetrica | thalassios symmetrica |
| | Coscinodiscus spp. | coscinodis spp. |
| | C. granii | coscinodis granii |
| | C. polychorda | coscinodis polychorda |
| Leptocylindraceae | | |
| | Lauderia borealis | lauderia borealis |
| | Bacteriosira fragilis | bacteriosi fragilis |
| Actinodiscaceae | | |
| | Actinoptychus undulatus | actinoptyc undulatus |
| | A. senarius | actinoptyc senarius |
| Asterolampraceae | | |
| | Asteromphalus heptactis | asterompha heptactis |
| | A. cf. sarcophagus | cf.asterom sarcophagus |

| | |
|---|---|
| Biddulphiaceae | |
| | Biddulphia spp. |
| | B. aurita |
| | B. longicruris |
| | Eucampia spp. |
| | E. zoodiacus |
| | Hemiaulus membranaceus |
| | Cerataulina pelagica |
| | Ditylum brightwellii |
| Chaetoceraceae | |
| | Chaetoceros spp. (cells) |
| | C. spp. (chains) |
| | C. spp. (spores) |
| | C. sp. 1 |
| | C. cf. meulleri |
| | C. perpusillum |
| | C. rostratum |
| | C. affine |
| | C. affine v. willei |
| | C. atlanticum |
| | C. boreale |
| | C. breve |
| | C. ceratosporum |
| | C. cinctum |
| | C. compressum |
| | C. constrictum |
| | C. convolutum |
| | C. curvisetum |
| | C. danicum |
| | C. debile |
| | C. decipiens |
| | C. decipiens f. singularis |
| | C. densum |
| | C. diadema |
| | C. didymum |
| | C. eibenii |
| | C. gracile |
| | C. laciniosum |
| | C. lorenzianum |
| | C. pelagicum |
| | C. peruvianum |
| | C. pseudocrinitum |

| | | |
|---|---|---|
| bidulphia | spp. | |
| bidulphia | aurita | |
| bidulphia | longicruris | |
| eucampia | spp. | |
| eucampia | zoodiacus | |
| hemiaulus | membranaceus | |
| cerataulin | pelagica | |
| ditylum | brightwellii | |
| | | |
| chaetocero | spp. | cells |
| chaetocero | spp. | chains |
| chaetocero | spp. | spores |
| chaetocero | sp.1 | |
| chaetocero | cf.muelleri | |
| chaetocero | cf.perpusill | |
| chaetocero | rostratum | |
| chaetocero | affine | |
| chaetocero | affine | v.willei |
| chaetocero | atlanticum | |
| chaetocero | boreale | |
| chaetocero | breve | |
| chaetocero | ceratosporum | |
| chaetocero | cinctum | |
| chaetocero | compressum | |
| chaetocero | constrictum | |
| chaetocero | convolutum | |
| chaetocero | curvisetum | |
| chaetocero | danicum | |
| chaetocero | debile | |
| chaetocero | decipiens | |
| chaetocero | decipiens | f.singularis |
| chaetocero | densum | |
| chaetocero | diadema | |
| chaetocero | didymum | |
| chaetocero | eibenii | |
| chaetocero | gracile | |
| chaetocero | laciniosum | |
| chaetocero | lorenzianum | |
| chaetocero | pelagicum | |
| chaetocero | peruvianum | |
| chaetocero | pseudocrinit | |

| | | | |
|---|---|---|---|
| | C. radicans | chaetocero | radicans |
| | C. seriacanthum | chaetocero | seriacanthum |
| | C. septentrion | chaetocero | septentriona |
| | C. simile | chaetocero | simile |
| | C. socialis | chaetocero | socialis |
| | C. subtile | chaetocero | subtile |
| | C. vistulae | chaetocero | vistulae |
| | C. wighami | chaetocero | wighami |
| | C. filiforme | chaetocero | filiforme |
| | C. simplex | chaetocero | simplex |
| | C. simplex v. calcitrans | chaetocero | simplex v.calcitrans |
| | C. vixvisibilis | chaetocero | vixvisibilis |
| Bacteriastraceae | | | |
| | Bacteriastrum delicatula | bacteriast | delicatula |
| Rhizosoleniaceae | | | |
| | Rhizosolenia spp. | rhizosolen | spp. |
| | R. alata f. gracillima | rhizosolen | alata f.gracillima |
| | R. alata f. indica | rhizosolen | alata f.indica |
| | R. alata f. alata | rhizosolen | alata f.alata |
| | R. bergonii | rhizosolen | bergonii |
| | R. delicatula | rhizosolen | delicatula |
| | R. fragilissima | rhizosolen | fragilissima |
| | R. fragilissima v. 1 | rhizosolen | fragilissima v.1 |
| | R. hebetata | rhizosolen | hebetata |
| | R. hebetata f. hiemalis | rhizosolen | hebetata f.hiemalis |
| | R. hebetata f. semispina | rhizosolen | hebetata f.semispina |
| | R. setigera | rhizosolen | setigera |
| | R. stolterfothii | rhizosolen | stolterfothi |
| | R. styliformis v. styliformis | rhizosolen | styliformis v.styliformi |
| Pennales | | | |
| | spp. | pennales | spp. |
| | spp. (0-20 um) | pennales | spp. 0-20 |
| | spp. (21-40 um) | pennales | spp. 21-40 |
| | spp. (›40 um) | pennales | spp. ›40 |
| Cymatocyraceae | | | |
| | Minutocellus scriptus | minuticell | scriptus |
| Fragilariaceae | | | |
| | Fragilaria spp. | fragilaria | spp. |
| | F. oceanica | fragilaria | oceanica |
| | Synedra acus | synedra | acus |

| | | | | |
|---|---|---|---|---|
| | Asterionella glacialis | asterionel | glacialis | |
| | A. kariana | asterionel | kariana | |
| | A. formosa | asterionel | formosa | |
| | A. bleakelyi | asterionel | bleakelyi | |
| | Thalassiothrix frauenfeldii | thalassiot | frauenfeldii | |
| | T. longissima | thalassiot | longissima | |
| | Thalassionema nitzschiodes | thalassion | nitzschoides | |
| | T. bacillaris | thalassion | bacillaris | |
| | Licmophora spp. | licmophora | spp. | |
| | L. abbreviata | licmophora | abbreviata | |
| | Striatella unipuntata | striatella | unipunctata | |
| | Grammatophora spp. | grammatoph | spp. | |
| | Denticulopsis semina | denticulop | semina | |
| Naviculaceae | | | | |
| | Gyrosigma spp. and Pleurosigma spp. | gyrosigma | spp. | pleurosigma |
| | Navicula spp. | navicula | spp. | |
| | N. calida | navicula | calida | |
| | Pleurosigma angulatum | pleurosigm | angulatum | |
| | P. acutum | pleurosigm | acutum | |
| | Tropidoneis spp. | tropidonei | spp. | |
| | T. antartica v. polyplasta | tropidonei | antarctica | v.polyplasta |
| | T. lepidoptera | tropidonei | lepidoptera | |
| Cymbellaceae | | | | |
| | Amphora spp. | amphora | spp. | |
| | A. pusio v. parvula | amphora | pusio | v.parvula |
| Nitzschiaceae | | | | |
| | Nitzschia spp. | nitzschia | spp. | |
| | N. cf. subcurvata | nitzschia | cf.subcurvat | |
| | N. cf. subpacifica | nitzschia | cf.subpacifi | |
| | N. cylindriformis and N. pseudonana | nitzschia | cylindrus | pseudonana |
| | N. sp. 1 | nitzschia | sp.1 | |
| | N. americana | nitzschia | americana | |
| | N. cuspidata | nitzschia | cuspidata | |
| | N. norvegica | nitzschia | norvegica | |
| | N. delicatissima | nitzschia | delicatissim | |
| | N. longissima | nitzschia | longissima | |
| | N. pungens | nitzschia | pungens | |
| | N. seriata | nitzschia | seriata | |
| | N. seriata v. obtusa | nitzschia | seriata | v.obtusa |
| | N. heimii | nitzschia | heimii | |

| | | | |
|---|---|---|---|
| | N. turgiduloides | nitzschia turgiduloide | |
| | N. bicapitata | nitzschia bicapitata | |
| | N. lineola | nitzschia lineola | |
| | N. closterium v. stiatula | nitzschia closterium | v.striatula |
| | N. pseudodelicatissima | nitzschia pseudodelica | |
| | N. granii v. curvata | nitzschia granii | v.curvata |
| | N. subfraudulenta | nitzschia subfraudulen | |
| | N. fraudulenta | nitzschia fraudulenta | |
| | N. impressa | nitzschia impressa | |
| | (= N. closterium) | * cylindroth closterium | |
| Bacillariaceae | | | |
| | Cylindrotheca fusiformis | cylindroth fusiformis | |
| Chlorophyta | | | |
| Chlorophyceae | | | |
| Volvocales | | | |
| Chlamydomonadaceae | | | |
| | Carteria spp. | carteria spp. | |
| Chlorococcales | | | |
| Oocystaceae | | | |
| | Ankistrodesmus spiralis | ankistrode spiralis | |
| | A. falcatus v. mirabilis | ankistrode falcatus | v.mirabilis |
| Scenedesmaceae | | | |
| | Scenedesmus acuminatus | scenedesmu acuminatus | v.minor |
| | S. quadricauda v. longispina | scenedesmu quadricauda | v.longispina |
| Prasinophyta | | | |
| Prasinophyceae | | | |
| Pyramimonadales | | | |
| Nephroselmidaceae | | | |
| | Micromonas pusilla | micromonas pusilla | |
| | Nephroselmis spp. | nephroselm spp. | |
| | Bipedinomonas spp. | bipedinomo spp. | |
| Polyblepharidaceae | | | |
| | Pyramimonas spp. (3-8 um) | pyramimona spp. | 3-8 |
| | Cymbomonas spp. | cymbomonas spp. | |
| Halosphaerales | | | |
| Pterospermataceae | | | |
| | Pterosperma spp. | pterosperm spp. | |
| Halosphaeraceae | | | |
| | Halosphaera spp. | halosphaer spp. | |

| | | | |
|---|---|---|---|
| Euglenophyta | | | |
| | spp. | euglenophy spp. | |
| Euglenophyceae | | | |
| Eutreptiales | | | |
| | Eutreptia spp. | eutreptia spp. | |
| | Eutreptiella spp. | eutreptiel spp. | |
| Pyrrophyta | | | |
| Dinophyceae | | | |
| | spp. (5-15 um) | dinophycea spp. | 5-15 |
| | spp. (16-50 um) | dinophycea spp. | 16-50 |
| Prorocentrales | | | |
| Prorocentraceae | | | |
| | Prorocentrum spp. | prorocentr spp. | |
| | P. minimum v. mariae-lebouriae | prorocentr minimum | v.mariae-leb |
| | P. baltioum | prorocentr baltioum | |
| | P. gracile | prorocentr gracile | |
| Dinophysiales | | | |
| Dinophysiaceae | | | |
| | Dinophysis spp | dinophysis spp. | |
| Gymnodiniales | | | |
| Gymnodiniaceae | | | |
| | 'Gonyaulax' rugosum | gonyaulax rugosum | |
| | Amphidinium spp. | amphidiniu spp. | |
| | Cochlodinium spp. | cochlodini spp. | |
| | Gymnodiium spp. | gymnodiniu spp. | |
| | G. vitiligo | gymnodiniu vitiligo | |
| | G. nelsonii | gymnodiniu nelsonii | |
| | G. splendens | gymnodiniu splendens | |
| | G. gracilentum | gymnodiniu gracilentum | |
| | Gyrodinium spp. | gyrodinium spp. | |
| | Katodinium rotundatum | katodinium rotundatum | |
| Ptychodiscaceae | | | |
| | Ptychodiscus noctiluca | ptychodiso noctiluca | |
| Peridiniales | | | |
| Peridiniaceae | | | |
| | Scripsiella spp. and Glenodinium spp. | scripsiell spp. | glenodinium |
| | Heterocapsa triquetra | heterocaps triquetra | |
| Gonyaulaceae | | | |
| | Gonyaulax spp. | gonyaulax spp. | |
| | G. catenella | gonyaulax catanella | |

| | | |
|---|---|---|
| Ceratiaceae | | |
| | Ceratium spp. | ceratium spp. |
| | C. furca | ceratium furca |
| | C. fusus | ceratium fusus |
| | C. longipes | ceratium longipes |
| | C. tripos | ceratium tripos |
| | C. lineatum | * chaetocero lineatum |
| Phytodiniales | | |
| Phytodiniaceae | | |
| | Pyrocystis spp. | pyrocystis spp. |
| Chloromonadophyta | | |
| Chloromonadophyceae | | |
| | Heterosigma akashiwo | heterosigm akashiwo |
| Cryptophyta | | |
| Cryptophyceae | | |
| Cryptomonadales | | |
| | spp. | cryptomona spp. |
| | spp. (5-10 um) | cryptomona spp. 5-10 |
| | spp. (11-20 um) | cryptomona spp. 11-20 |
| | spp. (21-30 um) | cryptomona spp. 21-30 |
| | Isoselmis spp. and hemiselmis spp. (4-6 um) | isoselmis spp. hemiselmis 4-6 |
| Cryptomonadaceae | | |
| | Cryptomonas ovata | cryptomona ovata |
| FLAGELLATES (autotrophic, unidentified) | | |
| | spp. | flagellate spp. |
| | spp. (1-2 um) | flagellate spp. 1-2 |
| | spp. (2-5 um) | flagellate spp. 2-5 |
| | spp. (6-15 um) | flagellate spp. 6-15 |
| Protozoa | | |
| | Mesodinium rubrum | mesodinium rubrum |

um - micrometres
syn - synonym
v. - variety
f. - form
of. - similar to

* In some data records Nitzschia closterium is listed as Cylindrotheca closterium
Ceratium lineatum is incorrectly listed in data records as Chaetoceros lineatum

Cruise 84-02

Total Abundance (no./litre)

| Taxon | 1-4N | 1-9N | 3-6 | 3-9 | 3-9N |
|---|---|---|---|---|---|
| chrysophyc sp.2 | 2.00E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| ochromonas spp. | 9.10E+04 | 7.85E+04 | 1.11E+05 | 7.60E+04 | 7.80E+04 |
| olisthodis carterae | 8.30E+04 | 2.66E+04 | 3.80E+04 | 1.78E+04 | 6.45E+04 |
| haptophyce spp. naked 2.5-3.5 | 9.80E+05 | 9.92E+05 | 1.28E+06 | 8.85E+05 | 7.14E+05 |
| corymbellu aureus | 0.00E+00 | 0.00E+00 | 1.20E+03 | 2.50E+03 | 0.00E+00 |
| chrysochro sp.1 | 0.00E+00 | 0.00E+00 | 3.20E+03 | 1.70E+03 | 0.00E+00 |
| chrysochro spp. 4-5.5 | 2.09E+05 | 1.62E+05 | 1.99E+05 | 1.76E+05 | 1.51E+05 |
| chrysochro spp. 6-10 | 5.50E+04 | 4.55E+04 | 1.06E+05 | 7.70E+04 | 1.27E+04 |
| phaeocysti pouchetii | 0.00E+00 | 0.00E+00 | 3.10E+03 | 3.70E+03 | 0.00E+00 |
| emiliania huxleyi | 9.80E+03 | 6.00E+03 | 6.40E+03 | 3.80E+03 | 5.70E+03 |
| leyanella arenaria | 0.00E+00 | 0.00E+00 | 1.14E+04 | 0.00E+00 | 0.00E+00 |
| thalassios spp. | 3.00E+02 | 7.00E+02 | 0.00E+00 | 4.00E+02 | 2.00E+02 |
| thalassios conferta | 2.00E+02 | 1.00E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| nitzschia cylindrus pseudonana | 6.00E+03 | 3.90E+03 | 4.00E+04 | 1.72E+04 | 2.02E+04 |
| nitzschia lineola | 0.00E+00 | 2.00E+02 | 4.00E+02 | 0.00E+00 | 0.00E+00 |
| nitzschia closterium v.striatula | 1.80E+03 | 1.00E+02 | 1.10E+03 | 3.90E+03 | 4.80E+03 |
| denticulop semina | 3.00E+02 | 0.00E+00 | 0.00E+00 | 6.00E+02 | 1.00E+02 |
| micromonas pusilla | 0.00E+00 | 6.14E+05 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| nephroselm spp. | 0.00E+00 | 0.00E+00 | 4.60E+03 | 3.10E+03 | 0.00E+00 |
| prorocentr balticum | 1.00E+03 | 3.00E+02 | 9.00E+02 | 1.20E+03 | 1.10E+03 |
| gymnodiniu spp. | 1.20E+03 | 4.00E+02 | 1.00E+03 | 1.30E+03 | 1.50E+03 |
| gymnodiniu gracilentum | 3.30E+03 | 1.40E+03 | 2.70E+03 | 1.40E+03 | 2.10E+03 |
| cryptomona spp. 5-10 | 0.00E+00 | 0.00E+00 | 2.00E+02 | 3.00E+02 | 0.00E+00 |
| cryptomona spp. 11-20 | 0.00E+00 | 0.00E+00 | 9.00E+02 | 4.00E+02 | 3.00E+02 |

Cruise 84-02

Total Abundance (no./litre)

| Taxon | 5-4N | 5-8N | 6-6 | 6-9A | 6-9N |
|---|---|---|---|---|---|
| chrysophyc sp.2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.00E+02 | 1.00E+02 |
| ochromonas spp. | 1.90E+05 | 1.09E+05 | 1.50E+05 | 1.90E+05 | 2.16E+05 |
| olisthodis carterae | 6.85E+04 | 1.57E+04 | 6.85E+04 | 2.44E+04 | 4.10E+04 |
| meringosph mediterranea | 0.00E+00 | 0.00E+00 | 1.00E+02 | 0.00E+00 | 0.00E+00 |
| haptophyce spp. naked 2.5-3.5 | 2.16E+06 | 1.20E+06 | 1.46E+06 | 2.09E+06 | 1.68E+06 |
| corymbellu aureus | 0.00E+00 | 0.00E+00 | 6.80E+03 | 9.90E+03 | 0.00E+00 |
| chrysochro sp.1 | 2.70E+03 | 0.00E+00 | 5.80E+04 | 3.20E+03 | 0.00E+00 |
| chrysochro spp. 4-5.5 | 3.67E+05 | 2.00E+05 | 1.76E+05 | 1.22E+06 | 4.12E+05 |
| chrysochro spp. 6-10 | 2.50E+04 | 1.10E+04 | 1.42E+04 | 1.91E+05 | 1.51E+05 |
| phaeocysti pouchetii | 0.00E+00 | 1.65E+04 | 2.82E+04 | 7.70E+03 | 0.00E+00 |
| emiliania huxleyi | 8.20E+03 | 1.05E+04 | 2.09E+04 | 9.30E+03 | 1.27E+04 |
| leyanella arenaria | 3.92E+04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| corethron criophilum | 0.00E+00 | 0.00E+00 | 2.00E+02 | 0.00E+00 | 0.00E+00 |
| thalassios spp. | 0.00E+00 | 0.00E+00 | 3.00E+02 | 4.00E+02 | 0.00E+00 |
| thalassios conferta | 0.00E+00 | 4.00E+02 | 0.00E+00 | 0.00E+00 | 6.00E+02 |
| rhizosolen alata f.gracillima | 0.00E+00 | 3.00E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| nitzschia cylindrus pseudonana | 1.80E+04 | 5.30E+04 | 3.78E+05 | 2.32E+04 | 2.22E+04 |
| nitzschia lineola | 0.00E+00 | 1.30E+03 | 3.00E+02 | 7.00E+02 | 3.00E+02 |
| nitzschia closterium v.striatula | 2.80E+03 | 1.00E+03 | 1.09E+04 | 2.09E+04 | 1.80E+04 |
| denticulop semina | 0.00E+00 | 0.00E+00 | 3.00E+02 | 4.00E+03 | 2.70E+03 |
| micromonas pusilla | 9.22E+05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| nephroselm spp. | 0.00E+00 | 0.00E+00 | 2.20E+03 | 1.30E+03 | 0.00E+00 |
| pyramimona spp. 3-8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.00E+03 | 0.00E+00 |
| pterosperm spp. | 0.00E+00 | 0.00E+00 | 2.00E+02 | 0.00E+00 | 0.00E+00 |
| prorocentr balticum | 2.60E+03 | 1.00E+03 | 1.50E+03 | 2.70E+03 | 3.00E+03 |
| gymnodiniu spp. | 1.10E+03 | 4.00E+02 | 4.30E+03 | 1.90E+03 | 1.80E+03 |
| gymnodiniu gracilentum | 3.70E+03 | 4.20E+03 | 3.40E+03 | 5.00E+03 | 5.60E+03 |
| cryptomona spp. 5-10 | 1.10E+03 | 4.00E+02 | 1.00E+03 | 1.10E+03 | 2.40E+03 |
| cryptomona spp. 11-20 | 2.00E+02 | 1.00E+02 | 1.50E+03 | 9.00E+02 | 4.00E+02 |

Cruise 84-02

Total Abundance (no./litre)

| Taxon | 8-7A | 8-7N | 8-9 | 11-6A | 11-6N |
|---|---|---|---|---|---|
| chrysophyc sp.2 | 0.00E+00 | 0.00E+00 | 5.00E+02 | 0.00E+00 | 0.00E+00 |
| ochromonas spp. | 2.30E+05 | 1.99E+05 | 3.78E+05 | 1.82E+05 | 1.58E+05 |
| olisthodis carterae | 4.80E+04 | 5.75E+04 | 1.02E+05 | 4.44E+04 | 6.80E+03 |
| haptophyce spp. naked 2.5-3.5 | 2.10E+06 | 2.14E+06 | 3.20E+06 | 1.97E+06 | 1.58E+06 |
| corymbellu aureus | 1.00E+03 | 0.00E+00 | 9.00E+03 | 2.10E+03 | 0.00E+00 |
| chrysochro sp.1 | 1.44E+04 | 1.48E+04 | 2.30E+04 | 6.50E+03 | 0.00E+00 |
| chrysochro spp. 4-5.5 | 2.77E+05 | 2.63E+05 | 3.70E+05 | 3.19E+05 | 3.00E+05 |
| chrysochro spp. 6-10 | 3.80E+04 | 4.20E+04 | 1.98E+04 | 2.00E+04 | 2.20E+04 |
| phaeocysti pouchetii | 6.00E+03 | 0.00E+00 | 4.70E+03 | 3.80E+03 | 0.00E+00 |
| emiliania huxleyi | 1.86E+04 | 2.67E+04 | 5.40E+03 | 6.10E+03 | 4.60E+03 |
| thalassios spp. | 4.00E+02 | 3.00E+02 | 7.00E+02 | 0.00E+00 | 0.00E+00 |
| chaetocero peruvianum | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.00E+02 | 3.00E+02 |
| chaetocero simplex v.calcitrans | 0.00E+00 | 5.00E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| nitzschia cylindrus pseudonana | 3.28E+05 | 3.51E+05 | 3.53E+05 | 1.02E+05 | 1.27E+05 |
| nitzschia longissima | 0.00E+00 | 0.00E+00 | 2.00E+02 | 0.00E+00 | 0.00E+00 |
| nitzschia closterium v.striatula | 8.10E+03 | 6.40E+03 | 1.94E+04 | 4.00E+03 | 4.80E+03 |
| nephroselm spp. | 3.80E+03 | 0.00E+00 | 1.70E+03 | 3.00E+03 | 0.00E+00 |
| prorocentr balticum | 9.00E+02 | 4.00E+02 | 6.00E+02 | 4.00E+02 | 3.00E+02 |
| gymnodiniu spp. | 3.90E+03 | 4.50E+03 | 3.30E+03 | 3.00E+02 | 5.00E+02 |
| gymnodiniu gracilentum | 4.10E+03 | 4.90E+03 | 4.30E+03 | 8.00E+02 | 1.20E+03 |
| cryptomona spp. 5-10 | 1.00E+03 | 7.00E+02 | 2.30E+03 | 1.10E+03 | 1.10E+03 |
| cryptomona spp. 11-20 | 1.10E+03 | 1.20E+03 | 1.40E+03 | 9.00E+02 | 7.00E+02 |

Cruise 84-02

Total Abundance (no./litre)

| Taxon | 11-9 | 14-6 | 14-9 |
|---|---|---|---|
| chrysophyc sp.2 | 0.00E+00 | 7.00E+02 | 1.00E+03 |
| cochromonas spp. | 2.44E+05 | 2.49E+05 | 2.38E+05 |
| olisthodis carterae | 3.02E+04 | 6.85E+04 | 2.30E+04 |
| meringosph mediterranea | 0.00E+00 | 2.00E+02 | 4.00E+02 |
| haptophyce spp. naked 2.5-3.5 | 2.31E+06 | 2.20E+06 | 1.71E+06 |
| corymbellu aureus | 1.70E+03 | 1.10E+03 | *0.00E+00* |
| chrysochro sp.1 | 1.37E+04 | 3.38E+04 | 2.78E+04 |
| chrysochro spp. 4-5.5 | 3.78E+05 | 5.35E+05 | 1.02E+05 |
| chrysochro spp. 6-10 | 2.96E+04 | 3.88E+04 | 1.60E+04 |
| phaeocysti pouchetii | 5.10E+03 | 4.40E+03 | 6.40E+03 |
| emiliania huxleyi | 1.40E+04 | 3.84E+04 | 9.25E+04 |
| corethron criophilum | 1.00E+02 | 0.00E+00 | 0.00E+00 |
| thalassios spp. | 0.00E+00 | 0.00E+00 | 1.10E+03 |
| thalassios conferta | 0.00E+00 | 1.60E+03 | 8.00E+02 |
| coscinodis spp. | 0.00E+00 | 2.00E+02 | 0.00E+00 |
| chaetocero peruvianum | 0.00E+00 | 5.00E+02 | 1.20E+03 |
| nitzschia cylindrus pseudonana | 1.33E+05 | 9.10E+04 | 1.23E+06 |
| nitzschia longissima | 0.00E+00 | 3.00E+02 | 0.00E+00 |
| nitzschia lineola | 0.00E+00 | 1.90E+03 | 0.00E+00 |
| nitzschia closterium v.striatula | 5.40E+03 | 3.08E+04 | 4.62E+04 |
| denticulop semina | 0.00E+00 | 0.00E+00 | 4.00E+02 |
| nephroselm spp. | 2.50E+03 | 2.30E+03 | 9.00E+02 |
| halosphaer spp. | 0.00E+00 | 1.00E+02 | 4.00E+02 |
| prorocentr baltioum | 2.10E+03 | 9.00E+02 | 1.60E+03 |
| gymnodiniu spp. | 8.00E+02 | 4.80E+03 | 3.40E+03 |
| gymnodiniu graoilentum | 1.90E+03 | 4.70E+03 | 1.85E+04 |
| cryptomona spp. 5-10 | 7.00E+02 | 2.00E+03 | 5.00E+03 |
| cryptomona spp. 11-20 | 4.00E+02 | 1.10E+03 | 4.10E+03 |

Cruise 84-02

Total Abundance (no./litre)

| Taxon | 21-7W | 21-7X | 21-7Y | 21-7Z |
|---|---|---|---|---|
| chrysophyc sp.2 | 1.00E+02 | 0.00E+00 | 2.00E+02 | 0.00E+00 |
| cochromonas spp. | 9.15E+04 | 8.80E+04 | 4.95E+04 | 4.40E+04 |
| olisthodis carterae | 1.14E+04 | 1.35E+04 | 1.00E+04 | 1.27E+04 |
| meringosph mediterranea | 0.00E+00 | 0.00E+00 | 2.00E+02 | 0.00E+00 |
| haptophyce spp. naked 2.5-3.5 | 7.20E+05 | 6.58E+05 | 5.35E+05 | 5.99E+05 |
| chrysochro sp.1 | 4.00E+03 | 2.40E+03 | 1.60E+03 | 1.80E+03 |
| chrysochro spp. 4-5.5 | 6.25E+04 | 7.40E+04 | 9.90E+04 | 9.00E+04 |
| chrysochro spp. 6-10 | 4.10E+03 | 5.70E+03 | 1.62E+04 | 1.16E+04 |
| emiliania huxleyi | 2.02E+04 | 1.81E+04 | 1.80E+03 | 2.17E+04 |
| thalassios spp. | 0.00E+00 | 4.00E+02 | 0.00E+00 | 0.00E+00 |
| thalassios conferta | 4.00E+02 | 5.00E+02 | 1.00E+03 | 8.00E+02 |
| coscinodis spp. | 4.00E+02 | 0.00E+00 | 2.00E+02 | 5.00E+02 |
| chaetocero peruvianum | 4.00E+02 | 3.00E+02 | 6.00E+02 | 4.00E+02 |
| chaetocero simplex v.calcitrans | 0.00E+00 | 0.00E+00 | 3.00E+02 | 0.00E+00 |
| nitzschia cylindrus pseudonana | 1.51E+05 | 1.81E+05 | 2.24E+05 | 2.18E+05 |
| nitzschia longissima | 0.00E+00 | 0.00E+00 | 2.00E+02 | 0.00E+00 |
| nitzschia pungens | 2.00E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| nitzschia lineola | 0.00E+00 | 3.00E+02 | 5.00E+02 | 2.00E+02 |
| nitzschia closterium v.striatula | 8.00E+03 | 7.00E+03 | 5.10E+03 | 6.00E+03 |
| denticulop semina | 2.00E+02 | 0.00E+00 | 5.00E+02 | 7.00E+02 |
| nephroselm spp. | 3.60E+03 | 4.10E+03 | 0.00E+00 | 1.10E+03 |
| halosphaer spp. | 0.00E+00 | 0.00E+00 | 3.00E+02 | 0.00E+00 |
| prorocentr balticum | 5.00E+03 | 7.20E+03 | 3.50E+03 | 6.30E+03 |
| gymnodiniu spp. | 2.20E+03 | 1.60E+03 | 5.70E+03 | 4.30E+03 |
| gymnodiniu gracilentum | 2.80E+03 | 5.40E+03 | 2.70E+03 | 4.30E+03 |
| cryptomona spp. 5-10 | 2.00E+02 | 8.00E+02 | 1.40E+03 | 1.10E+03 |
| cryptomona spp. 11-20 | 9.00E+02 | 7.00E+02 | 3.80E+03 | 4.40E+03 |

Cruise 84-02

Total Abundance (no./litre)

| Taxon | 21-9W | 21-9X | 21-9Y | 21-9Z |
|---|---|---|---|---|
| chrysophyc sp.2 | 8.00E+02 | 1.40E+03 | 0.00E+00 | 0.00E+00 |
| cchromonas spp. | 7.35E+04 | 6.75E+04 | 1.01E+05 | 8.70E+04 |
| olisthodis carterae | 6.20E+03 | 6.50E+03 | 1.48E+04 | 1.29E+04 |
| haptophyce spp. naked 2.5-3.5 | 7.00E+05 | 6.69E+05 | 6.80E+05 | 6.86E+05 |
| chrysochro sp.1 | 5.00E+03 | 4.20E+03 | 2.10E+03 | 1.60E+03 |
| chrysochro spp. 4-5.5 | 1.71E+05 | 2.48E+04 | 8.20E+04 | 7.70E+04 |
| chrysochro spp. 6-10 | 8.80E+03 | 8.00E+03 | 8.00E+03 | 8.60E+03 |
| emiliania huxleyi | 1.11E+04 | 9.00E+03 | 1.90E+04 | 2.36E+04 |
| thalassios spp. | 4.00E+02 | 6.00E+02 | 5.00E+02 | 3.00E+02 |
| thalassios conferta | 3.00E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| coscinodis spp. | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.00E+02 |
| chaetocero peruvianum | 4.00E+02 | 3.00E+02 | 0.00E+00 | 0.00E+00 |
| nitzschia cylindrus pseudonana | 2.90E+05 | 2.49E+05 | 2.10E+05 | 1.99E+05 |
| nitzschia longissima | 2.00E+02 | 1.00E+02 | 0.00E+00 | 0.00E+00 |
| nitzschia lineola | 6.00E+02 | 4.00E+02 | 1.60E+03 | 2.70E+03 |
| nitzschia closterium v.striatula | 6.00E+03 | 8.10E+03 | 6.60E+03 | 7.20E+03 |
| nitzschia granii v.curvata | 0.00E+00 | 0.00E+00 | 2.00E+02 | 1.00E+02 |
| denticulop semina | 1.00E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| nephroselm spp. | 3.20E+03 | 2.10E+03 | 1.80E+03 | 1.00E+03 |
| halosphaer spp. | 0.00E+00 | 0.00E+00 | 1.00E+02 | 3.00E+02 |
| prorocentr balticum | 2.70E+03 | 1.80E+03 | 1.90E+03 | 2.40E+03 |
| gymnodiniu spp. | 2.30E+03 | 1.70E+03 | 2.10E+03 | 2.00E+03 |
| gymnodiniu gracilentum | 1.20E+03 | 1.70E+03 | 2.60E+03 | 2.10E+03 |
| cryptomona spp. 5-10 | 6.00E+02 | 7.00E+02 | 0.00E+00 | 0.00E+00 |
| cryptomona spp. 11-20 | 2.00E+02 | 3.00E+02 | 6.00E+02 | 8.00E+02 |

Cruise 84-02

Total Abundance (no./litre)

| Taxon | A2-5A | A2-5N | A2-8 | E5 | E8 |
|---|---|---|---|---|---|
| chrysophyc sp.2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.00E+02 |
| cochromonas spp. | 2.73E+05 | 2.66E+05 | 2.69E+05 | 1.75E+05 | 3.08E+05 |
| olisthodis carterae | 7.55E+04 | 5.55E+04 | 5.16E+04 | 5.70E+04 | 6.80E+04 |
| meringosph mediterranea | 6.00E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| haptophyce spp. naked 2.5-3.5 | 2.65E+06 | 2.39E+06 | 2.45E+06 | 1.79E+06 | 2.66E+06 |
| corymbellu aureus | 5.10E+03 | 3.50E+03 | 0.00E+00 | 0.00E+00 | 2.80E+03 |
| chrysochro sp.1 | 2.24E+04 | 1.76E+04 | 5.00E+03 | 3.36E+04 | 7.70E+03 |
| chrysochro spp. 4-5.5 | 5.82E+05 | 5.01E+05 | 3.36E+05 | 3.00E+05 | 4.42E+05 |
| chrysochro spp. 6-10 | 3.94E+04 | 6.35E+04 | 1.90E+04 | 3.40E+04 | 2.05E+05 |
| phaeocysti pouchetii | 1.60E+03 | 0.00E+00 | 2.50E+03 | 7.10E+03 | 5.10E+03 |
| emiliania huxleyi | 2.05E+04 | 3.06E+04 | 7.25E+04 | 2.90E+04 | 2.95E+04 |
| thalassios spp. | 2.00E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.00E+03 |
| chaetocero peruvianum | 6.10E+03 | 4.30E+03 | 3.00E+03 | 1.20E+03 | 1.00E+03 |
| nitzschia cylindrus pseudonana | 2.62E+05 | 2.10E+05 | 1.55E+05 | 2.73E+05 | 4.00E+05 |
| nitzschia lineola | 2.30E+03 | 1.80E+03 | 2.00E+02 | 1.40E+03 | 1.20E+03 |
| nitzschia closterium v.striatula | 3.13E+04 | 2.40E+04 | 1.54E+04 | 2.12E+04 | 1.82E+04 |
| nephroselm spp. | 5.00E+03 | 4.10E+03 | 0.00E+00 | 1.80E+03 | 6.30E+03 |
| pterosperm spp. | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.00E+02 | 0.00E+00 |
| prorocentr baltioum | 3.20E+03 | 3.30E+03 | 4.10E+03 | 3.00E+02 | 1.20E+03 |
| gymnodiniu spp. | 1.68E+04 | 8.80E+03 | 1.70E+03 | 1.90E+03 | 8.00E+02 |
| gymnodiniu gracilentum | 5.20E+03 | 6.00E+03 | 2.80E+03 | 9.00E+02 | 8.00E+02 |
| cryptomona spp. 5-10 | 8.00E+02 | 5.00E+02 | 1.10E+03 | 6.00E+02 | 0.00E+00 |
| cryptomona spp. 11-20 | 0.00E+00 | 0.00E+00 | 6.00E+02 | 1.20E+03 | 7.00E+02 |

Cruise 84-02

Total Abundance (no./litre)

| Taxon | F2-6 | F2-9 | K7 | K36 | K36N |
|---|---|---|---|---|---|
| chrysophyc sp.2 | 0.00E+00 | 8.00E+02 | 1.20E+03 | 1.80E+03 | 1.50E+03 |
| cchromonas spp. | 1.46E+05 | 3.50E+05 | 2.60E+05 | 2.58E+05 | 2.44E+05 |
| olisthodis carterae | 1.19E+05 | 4.52E+04 | 1.15E+04 | 5.70E+04 | 4.55E+04 |
| meringosph mediterranea | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.00E+02 | 0.00E+00 |
| haptophyce spp. naked 2.5-3.5 | 1.51E+06 | 3.35E+06 | 2.36E+06 | 2.30E+06 | 1.94E+06 |
| corymbellu aureus | 1.50E+03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| chrysochro sp.1 | 2.26E+04 | 1.12E+04 | 4.58E+04 | 5.68E+04 | 4.10E+04 |
| chrysochro spp. 4-5.5 | 4.59E+05 | 4.96E+05 | 8.60E+05 | 5.60E+05 | 8.78E+05 |
| chrysochro spp. 6-10 | 2.32E+04 | 1.12E+05 | 1.78E+05 | 5.02E+04 | 9.00E+04 |
| phaeocysti pouchetii | 3.60E+03 | 9.40E+03 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| emiliania huxleyi | 1.93E+04 | 2.88E+04 | 1.63E+04 | 2.76E+04 | 3.80E+04 |
| thalassios spp. | 0.00E+00 | 4.00E+02 | 1.20E+03 | 1.90E+03 | 5.00E+02 |
| thalassios conferta | 0.00E+00 | 4.00E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| chaetocero peruvianum | 0.00E+00 | 1.30E+03 | 8.00E+02 | 7.00E+02 | 2.00E+02 |
| nitzschia cylindrus pseudonana | 2.03E+05 | 3.75E+05 | 6.36E+05 | 5.57E+05 | 1.82E+05 |
| nitzschia pungens | 0.00E+00 | 3.00E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| nitzschia lineola | 0.00E+00 | 0.00E+00 | 1.30E+03 | 3.00E+02 | 0.00E+00 |
| nitzschia closterium v.striatula | 2.49E+04 | 2.16E+04 | 2.14E+04 | 3.54E+04 | 2.30E+04 |
| nitzschia granii v.curvata | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.00E+02 | 0.00E+00 |
| denticulop semina | 3.00E+02 | 0.00E+00 | 0.00E+00 | 5.00E+02 | 1.00E+02 |
| nephroselm spp. | 0.00E+00 | 2.40E+03 | 1.85E+04 | 6.90E+03 | 0.00E+00 |
| pterosperm spp. | 2.00E+02 | 7.00E+02 | 5.00E+02 | 0.00E+00 | 0.00E+00 |
| halosphaer spp. | 0.00E+00 | 2.00E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| prorocentr baltioum | 0.00E+00 | 3.60E+03 | 1.00E+03 | 1.20E+03 | 1.60E+03 |
| prorocentr gracile | 8.00E+02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| gymnodiniu spp. | 5.50E+03 | 4.80E+03 | 1.30E+04 | 7.00E+03 | 6.00E+03 |
| gymnodiniu gracilentum | 3.40E+03 | 1.20E+03 | 9.50E+03 | 6.60E+03 | 5.80E+03 |
| cryptomona spp. 5-10 | 1.00E+03 | 0.00E+00 | 1.10E+03 | 3.00E+02 | 4.00E+02 |
| cryptomona spp. 11-20 | 6.00E+02 | 8.00E+02 | 1.90E+03 | 5.00E+02 | 5.00E+02 |

Cruise 84-02

Total Abundance (no./litre)

| Taxon | OA | R7 | R36 | P4 |
|---|---|---|---|---|
| chrysophyc sp.2 | 0.00E+00 | 4.00E+02 | 1.00E+03 | 0.00E+00 |
| cochromonas spp. | 0.00E+00 | 4.54E+05 | 4.59E+05 | 0.00E+00 |
| olisthodis carterae | 0.00E+00 | 5.45E+04 | 4.56E+04 | 0.00E+00 |
| haptophyce spp. naked 2.5-3.5 | 0.00E+00 | 4.70E+06 | 3.76E+06 | 0.00E+00 |
| chrysochro sp.1 | 0.00E+00 | 2.00E+02 | 3.42E+04 | 0.00E+00 |
| chrysochro spp. 4-5.5 | 0.00E+00 | 7.31E+05 | 5.38E+05 | 0.00E+00 |
| chrysochro spp. 6-10 | 0.00E+00 | 4.40E+04 | 3.06E+04 | 0.00E+00 |
| emiliania huxleyi | 0.00E+00 | 4.20E+03 | 2.95E+04 | 0.00E+00 |
| thalassios spp. | 0.00E+00 | 4.00E+02 | 5.00E+02 | 0.00E+00 |
| thalassios conferta | 0.00E+00 | 5.00E+02 | 1.20E+03 | 0.00E+00 |
| chaetocero peruvianum | 0.00E+00 | 1.70E+03 | 7.00E+02 | 0.00E+00 |
| nitzschia cylindrus pseudonana | 0.00E+00 | 7.62E+05 | 7.53E+05 | 0.00E+00 |
| nitzschia closterium v.striatula | 0.00E+00 | 1.25E+04 | 1.08E+04 | 0.00E+00 |
| nitzschia granii v.curvata | 0.00E+00 | 2.00E+02 | 4.00E+02 | 0.00E+00 |
| denticulop semina | 0.00E+00 | 0.00E+00 | 4.00E+02 | 0.00E+00 |
| nephroselm spp. | 0.00E+00 | 2.70E+04 | 1.90E+04 | 0.00E+00 |
| pterosperm spp. | 0.00E+00 | 9.00E+02 | 0.00E+00 | 0.00E+00 |
| prorocentr balticum | 0.00E+00 | 1.70E+03 | 8.00E+02 | 0.00E+00 |
| gymnodiniu spp. | 0.00E+00 | 1.48E+04 | 1.27E+04 | 0.00E+00 |
| gymnodiniu gracilentum | 0.00E+00 | 2.70E+03 | 9.70E+03 | 0.00E+00 |
| cryptomona spp. 5-10 | 0.00E+00 | 1.70E+03 | 2.00E+03 | 0.00E+00 |
| cryptomona spp. 11-20 | 0.00E+00 | 7.00E+02 | 1.30E+03 | 0.00E+00 |

Cruise 84-02

Total Abundance (no./litre)

| Taxon | P5A1 | P5A2 |
|---|---|---|
| ochromonas spp. | 2.04E+05 | 1.75E+05 |
| olisthodis carterae | 2.20E+03 | 1.80E+03 |
| haptophyce spp. naked 2.5-3.5 | 1.72E+06 | 1.78E+06 |
| chrysochro spp. 4-5.5 | 3.30E+05 | 3.11E+05 |
| chrysochro spp. 6-10 | 1.65E+04 | 2.10E+04 |
| thalassios spp. | 6.00E+02 | 2.00E+02 |
| thalassios conferta | 0.00E+00 | 3.00E+02 |
| cerataulin pelagica | 8.00E+02 | 3.00E+02 |
| chaetocero compressum | 0.00E+00 | 6.00E+02 |
| chaetocero convolutum | 0.00E+00 | 2.00E+02 |
| chaetocero decipiens | 0.00E+00 | 6.00E+02 |
| chaetocero peruvianum | 2.90E+03 | 6.00E+02 |
| rhizosolen alata f.gracillima | 1.04E+04 | 2.40E+03 |
| rhizosolen fragilissima | 7.00E+02 | 2.00E+02 |
| rhizosolen stolterfothi | 2.80E+03 | 3.60E+03 |
| rhizosolen styliformis v.styliformi | 1.80E+03 | 0.00E+00 |
| liomophora abbreviata | 2.00E+03 | 2.60E+03 |
| nitzschia cylindrus pseudonana | 3.42E+04 | 2.80E+04 |
| nitzschia closterium v.striatula | 4.80E+03 | 5.40E+03 |
| pterosperm spp. | 0.00E+00 | 3.00E+02 |
| halosphaer spp. | 0.00E+00 | 2.00E+02 |
| gymnodiniu spp. | 2.10E+03 | 3.10E+03 |
| cryptomona spp. 5-10 | 3.48E+04 | 3.00E+04 |
| cryptomona spp. 11-20 | 8.00E+02 | 1.20E+03 |

DATA SECTON 6

Zooplankton taxonomic list. abundance data and sample identification

ZOOPLANKTON TAXONOMIC LIST (WITH ABBREVIATIONS USED IN DATA RECORDS)

| | Abbreviations in data records |
|---|---|
| Pyrrophyta | |
| Dinophyceae | |
| Peridiniales | |
| Noctilucaceae | |
| Noctiluca spp. | noctiluca spp. |
| Saroodina | |
| Actinopodea | |
| Radiolaria | |
| Unidentified | sar:act:ra radiolaria |
| Cnidaria | |
| Hydrozoa | |
| Unidentified (medusae) | medusae unidentified |
| Unidentified (medusae, juvenile) | medusae juvenile unidentified |
| Hydroida | |
| Corynidae | |
| Sarsia sp. | sarsia sp. |
| Leptomedusae | |
| Aequorea spp. | aequorea spp. |
| Phialidium sp. | phialidium sp. |
| Limnomedusae | |
| Probosoidactyla sp. | proboscida sp. |
| Trachylida | |
| Trachymedusae | |
| Aglantha sp. | aglantha sp. |
| Narcomedusae | |
| Aegina sp. | aegina sp. |
| Siphonophora | |
| Unidentified (planula) | siphonopho planula |
| Unidentified (pneumatophore) | siphonopho pneumatoph |
| Unidentified (nectophore bracts) | nectophore bracts |
| Ctenophora | |
| Tentaculata | |
| Cydippida | |
| Pleurobrachiidae | |
| Unidentified (juvenile) | pleurobran juvenile |
| Pleurobrachia sp. | pleurobrac sp. |
| Nuda | |
| Beroida | |
| Beroe spp. | beroe spp. |

| | | | | |
|---|---|---|---|---|
| Annelida | | | | |
| Polychaeta | | | | |
| | Unidentified (larvae) | polychaeta | larvae | |
| Tomopteridae | | | | |
| | Tomopteris septentrionalis | tomopteris | septentriona | |
| Mollusca | | | | |
| Gastropoda | | | | |
| Pteropoda | | | | |
| | Unidentified | pteropod | unidentified | |
| | Unidentified (large, triangular) | pteropod | big | triangle |
| | Unidentified (small, triangular) | pteropod | small | triangle |
| | Peraclis sp. | peraclis | sp. | |
| Thecosomata | | | | |
| Limacinidae | | | | |
| | Limacina sp. (1) | limacina | sp. | |
| | Limacina sp. (2: large) | limacina | large | |
| Cymbuliidae | | | | |
| | Unidentified | gastropoda | cymbulidae | |
| Gymnosomata | | | | |
| Clionidae | | | | |
| | Clione sp. | clione | sp. | |
| Bivalvia | | | | |
| | Unidentified (larvae) | bivalva | larva | |
| Cephalopoda | | | | |
| | Unidentified | mollusca | cephalopod | |
| Coleoidea (squid) | | | | |
| | Unidentified (juvenile) | squid | juvenile | |
| Octopoda | | | | |
| | Unidentified (juvenile) | octopod | juvenile | |
| Arthropoda | | | | |
| Crustacea | | | | |
| Branchiopoda | | | | |
| Cladocera | | | | |
| Polyphemidae | | | | |
| | Evadne sp. | evadne | sp. | |
| | Podon sp. | podon | sp. | |
| Ostracoda | | | | |
| Myodocopa | | | | |
| Conchoaeidae | | | | |
| | Cochoecia sp. | conchoecia | sp. | |

| | | | |
|---|---|---|---|
| Copepoda | | | |
| | Unidentified | crust:cope | unidentified |
| | Unidentified nauplii | copepod | nauplii |
| Calanoida | | | |
| | Unknown sp. (1) | calanoida | calanoi(1) |
| | Unknown sp. (2) | calanoida | calanoi(2) |
| | Aetidius armatus | aetidius | armatus |
| | Acartia californiens | acartia | californiens |
| | A. clausii | acartia | clausii |
| | A. danae | acartia | danae |
| | A. longiremis | acartia | longiremis |
| | Bradyidius sp. | bradyidius | sp. |
| | Calanus sp. | calanus | sp. |
| | C. marshallae | calanus | marshallae |
| | C. pacificus | calanus | pacificus |
| | C. marshallae/pacificus | calanus | marsha/pacif |
| | Candacia sp. | candacia | sp. |
| | C. bipinnata | candacia | bipinnata |
| | C. columbiae | candacia | columbiae |
| | Centraugaptilus macrodus | centraugap | macrodus |
| | Centropages abdominalis | centropage | abdominalis |
| | Chiridius gracilis | chiridius | gracilis |
| | Clausocalanus lividus (sp. 1) | clausocala | sp. |
| | C. parapergens (sp. 2) | clausocala | sp. (2) |
| | Ctenocalanus vanus | ctenocalan | vanus |
| | Epilabidocera sp. | epilabidoc | sp. |
| | E. amphitrite | epilabidoc | amphitrite |
| | Eucalanus bungi | eucalanus | bungi |
| | Euchaeta sp. | euchaeta | sp. |
| | E. japonica (= E. elongata) | euchaeta | japonica |
| | E. media | euchaeta | media |
| | E. sp. (large) | euchaeta | (big) |
| | Euchirella sp. | euchirella | sp. |
| | E. pseudopulchra | euchirella | pseudopulchra |
| | E. rostrata | euchirella | rostrata |
| | Gaetanus sp. | gaetanus | sp. |
| | Gaidius columbiae | gaidius | columbiae |
| | G. variabilis | gaidius | variablis |
| | Haloptilus pseudooxycephalus | haloptilus | pseudooxycep |
| | Heterohabdus sp. (1) | heterohabd | sp. |
| | H. sp. (2) | heterohabd | sp.(2) |
| | H. sp. (3) | heterohabd | sp.(3) |
| | H. tanneri | heterohabd | tanneri |
| | Heterostylites sp. | heterostyl | sp. |
| | Lophothrix sp. | lophothrix | sp. |
| | L. frontalis | lophothrix | frontalis |
| | Lucicutia sp. | lucicutia | sp. |
| | L. ovalis | lucicutia | ovalis |
| | Mesocalanus tenuicornis (ex. Calanus) | calanus | tenuicornis |
| | Metridia sp. | metridia | sp. |
| | M. okhotensis | metridia | okhotensis |
| | M. pacifica | metridia | pacifica |
| | Microcalanus sp. | microcalan | sp. |

| | | |
|---|---|---|
| | Neocalanus spp. | neocalanus spp. |
| | N. cristatus | neocalanus cristatus |
| | N. plumchrus | neocalanus plumchrus |
| | N. plumchrus var. 1/2 | neocalanus plumchrus var.1/2 |
| | N. flemingeri | neocalanus plumchrus var.2 |
| | Paracalanus sp. | paracalanu sp. |
| | Paraeuchaeta glacialis | paraeuchae glacialis |
| | P. spinifera | paraeuchae spinifera |
| | Pleuromamma sp. (1) | pleuromamm sp. |
| | P. sp. (2) | pleuromamm sp.(2) |
| | P. sp. (3) | pleuromamm sp.(3) |
| | P. scutullata | pleuromamm scutullata |
| | Pseudocalanus sp. | pseudocala sp. |
| | Racovitzanus antarcticus | racovitzan antarcticus |
| | Scaphocalanus sp. | scaphocala sp. |
| | S. brevicornis | scaphocala brevicornis |
| | S. magnus | scaphocala magnus |
| | Scolecithricella minor | scolecithr minor |
| | Scottocalanus sp. | scottocala sp. |
| | Spinocalanus sp. | spinocalan sp. |
| | S. brevicaudatus | spinocalan brevicaudatu |
| | Tortanus discaudatus | tortanus discaudatus |
| | Undinella sp. | undinella sp. |
| Harpacticoida | | |
| | Aegisthus sp. | aegisthus sp. |
| | Microsetella spp. | microsetel spp. |
| Cyclopoida | | |
| | Corycaeus sp. | corycaeus sp. |
| | Oithona helgolanoica | oithona helgolanoica |
| | O. spinirostris | oithona spinirostris |
| | Oncaea sp. | oncaea sp. |
| Cirripedia | | |
| Thoracica | | |
| Balanomorpha | | |
| Balanidae | | |
| | Unidentified (nauplii) | barnacle nauplii |
| | Unidentified (cyprids) | barnacle cyprids |
| Cumacea | | |
| | Unidentified | crust:mala cumacea |
| Isopoda | | |
| Cryptoniscidae | | |
| | Unidentified | crust:mala isopoda cryptoniscid |
| Amphipoda | | |
| | Unidentified sp. (1) | amphipoda unidentified |
| | Unidentified sp. (2: shovel-head) | amphipoda shovel_head |
| | Unidentified (juveniles) | amphipoda unidentified juveniles |

| | | | |
|---|---|---|---|
| Gammaridea | | | |
| | Unidentified sp. | amphi:gamm | gammari(l) |
| | Calliopius sp. | calliopius | sp. |
| | Cyphocaris sp. | cyphocaris | sp. |
| | Melphidippa sp. | melphidipp | sp. |
| | Orchomenella sp. | orchomenel | sp. |
| Hyperiidea | | | |
| | Unidentified sp. | amphi:hype | hyperii(l) |
| | Euprimno sp. | euprimno | sp. |
| | Hyperia sp. | hyperia | sp. |
| | Parathemisto sp. | parathemis | sp. |
| | Phronima spp. | phronima | spp. |
| | Scina sp. | scina | sp. |
| Peracarida | | | |
| Mysidacea | | | |
| | Unidentified | pera:mysid | mysid |
| Eucarida | | | |
| Euphausiacea | | | |
| | Unidentified | euphausid | unidentified |
| | Unidentified (juveniles) | crust:mala | euphausiac juveniles |
| | Unidentified (larvae) | euphausid | larva |
| | Euphausia pacifica | euphausia | pacifica |
| | Nematoscelis sp. | nematoscel | sp. |
| | Tessarabrachion oculatus | tessarabra | oculatus |
| | Thysanoessa longipes | thysanoess | longipes |
| | T. raschii | thysanoess | raschii |
| | T. spinifera | thysanoess | spinifera |
| | T. inspinata | thysanoess | inspinata |
| Decapoda | | | |
| | Unidentified (larvae) | decapod | larva |
| Natantia | | | |
| | Unidentified spp. | deca:natan | natantia |
| Galatheidae | | | |
| | Munida sp. (larvae) | galatheoid | munida larva |
| Chaetognatha | | | |
| | Unidentified | chaetognat | unidentified |
| | Unidentified (juveniles) | chaetognat | unidentified juveniles |
| | Eukrohnia hamata | eukrohnia | hamata |
| | Sagitta elegens | sagitta | elegens |
| | S. scrippsae | sagitta | scrippsae |

| | | | |
|---|---|---|---|
| Chordata | | | |
| Urochordata | | | |
| Thaliacea | | | |
| Salpida | | | |
| | Unidentified spp. | chord:uroc | thali:salp |
| Appendicularia | | | |
| | Unidentified spp. | larvacean | larvaceans |
| Gnathostomata | | | |
| | Unidentified (eggs) | vert:fish | eggs |
| | Unidentified (larvae) | vert:fish | larvae |
| Unclassified/unknown taxa | | | |
| | Unidentified nauplii | nauplius | unidentified |
| | Unidentified eggs | unidentifi | eggs |
| | Cyphonaute larvae (Bryozoan) | cyphonaute | larva |
| | Echinopluteus larvae (Echinoderm et al.) | echinoplut | larvae |
| | Trochophore larvae (Molluso/Annelid et al.) | trochophor | larva |
| | Funny thing | "funny | thing" |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | 1-1 | 1-2 | 1-3 | 1-4 | 1-5 |
|---|---|---|---|---|---|
| parathemis sp. | 0.3 | 0.1 | 0.1 | 0.0 | 0.2 |
| euprimno sp. | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| chaetognat unidentified juveniles | 1.5 | 4.6 | 2.4 | 1.8 | 3.7 |
| sagitta elegans | 0.2 | 0.4 | 0.1 | 0.1 | 0.1 |
| eukrohnia hamata | 3.9 | 4.0 | 1.6 | 1.4 | 11.8 |
| copepod nauplii | 0.0 | 0.1 | 0.3 | 0.0 | 0.0 |
| euphausid larva | 3.2 | 0.2 | 0.0 | 7.7 | 29.3 |
| decapod larva | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 |
| amphipoda unidentified juveniles | 2.2 | 0.2 | 0.0 | 1.4 | 1.5 |
| larvacean larvaceans | 2.0 | 1.9 | 2.6 | 1.4 | 1.5 |
| aglantha sp. | 0.6 | 0.0 | 9.3 | 3.1 | 0.5 |
| conchoecia sp. | 5.9 | 10.5 | 7.6 | 4.9 | 0.0 |
| nectophore bracts | 0.7 | 0.5 | 1.8 | 1.7 | 0.8 |
| calanus sp. s1/2 | 0.0 | 0.0 | 0.0 | 0.7 | 0.0 |
| calanus tenuicornis .le.s4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 |
| eucalanus bungi s3 | 2.2 | 1.0 | 0.3 | 0.7 | 1.5 |
| eucalanus bungi s4 | 5.4 | 4.1 | 6.6 | 14.6 | 22.5 |
| eucalanus bungi s5m | 5.9 | 3.4 | 4.5 | 5.6 | 28.5 |
| eucalanus bungi s5f | 5.9 | 1.4 | 5.5 | 4.5 | 26.2 |
| eucalanus bungi s6m | 1.0 | 1.9 | 0.5 | 0.7 | 0.0 |
| eucalanus bungi s6f | 3.1 | 1.3 | 3.2 | 5.8 | 3.8 |
| euchaeta japonica s1/2 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s3 | 0.2 | 0.0 | 0.5 | 0.0 | 0.0 |
| euchaeta japonica s4 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| euchaeta japonica s5m | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s5f | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s6m | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s6f | 0.2 | 0.2 | 0.0 | 0.0 | 0.1 |
| metridia sp. .le.s3 | 6.4 | 9.7 | 44.9 | 15.6 | 6.0 |
| metridia sp. s4 | 1.5 | 4.1 | 14.5 | 17.4 | 1.5 |
| metridia pacifica s5m | 3.7 | 0.8 | 5.5 | 7.6 | 2.3 |
| metridia pacifica s5f | 0.7 | 0.3 | 1.6 | 1.7 | 2.3 |
| metridia pacifica s6m | 0.5 | 0.4 | 0.0 | 0.7 | 0.0 |
| metridia pacifica s6f | 4.4 | 1.5 | 6.8 | 21.8 | 9.0 |
| neocalanus cristatus s1 | 0.0 | 0.3 | 0.3 | 0.0 | 2.2 |

| | | | | | |
|---|---|---|---|---|---|
| neocalanus cristatus s2 | 0.0 | 0.0 | 0.0 | 0.5 | 2.2 |
| neocalanus cristatus s3 | 0.2 | 0.0 | 0.5 | 0.3 | 6.0 |
| neocalanus cristatus s4 | 0.7 | 0.4 | 4.7 | 1.4 | 10.1 |
| neocalanus cristatus s5 | 2.7 | 5.6 | 1.3 | 0.4 | 0.8 |
| neocalanus plumchrus s4 | 17.2 | 0.0 | 1.8 | 1.4 | 20.3 |
| neocalanus plumchrus s5 | 8.7 | 0.0 | 0.9 | 1.0 | 0.0 |
| oithona helgolanoica | 3.2 | 0.0 | 2.9 | 8.0 | 64.5 |
| oithona spinirostris | 4.9 | 0.1 | 4.5 | 20.2 | 88.5 |
| pseudocala sp. .le.s3 | 0.7 | 0.0 | 0.0 | 0.0 | 0.8 |
| pseudocala sp. s4 | 4.9 | 0.0 | 0.0 | 0.0 | 1.5 |
| pseudocala sp. s5m | 1.0 | 0.0 | 0.0 | 0.7 | 0.0 |
| pseudocala sp. s5f | 1.5 | 0.0 | 0.0 | 0.0 | 1.5 |
| pseudocala sp. s6m | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 |
| pseudocala sp. s6f | 8.6 | 0.0 | 0.5 | 0.7 | 3.8 |
| scolecithr minor .le.s4 | 0.5 | 0.1 | 0.8 | 2.8 | 3.0 |
| scolecithr minor s5 | 1.0 | 0.0 | 0.5 | 1.4 | 4.5 |
| scolecithr minor s6m | 0.2 | 0.0 | 0.0 | 0.7 | 0.8 |
| scolecithr minor s6f | 0.5 | 0.2 | 0.5 | 3.5 | 3.0 |
| aegisthus sp. | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| aetideus armatus s6f | 0.0 | 0.0 | 1.3 | 0.0 | 0.0 |
| aetideus armatus s6m | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| mollusca bivalva larva | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 |
| candacia columbiae s6f | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| candacia columbiae s6m | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| clione sp. | 1.2 | 0.7 | 15.8 | 2.4 | 0.8 |
| corycaeus sp. | 0.0 | 0.1 | 0.3 | 0.0 | 1.5 |
| crust:mala isopoda cryptoniscid | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 |
| vert:fish larvae | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 |
| gaetanus sp. .le.s4 | 0.7 | 1.9 | 0.0 | 0.0 | 0.0 |
| heterorhab tanneri s6f | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| heterorhab tanneri s6m | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| lucicutia sp. .le.s4 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 |
| lucicutia sp. s5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 |
| microcalan sp. s5 | 1.2 | 0.1 | 3.7 | 6.9 | 6.0 |
| microcalan sp. .le.s4 | 0.0 | 0.0 | 0.3 | 0.3 | 1.5 |
| microcalan sp. s6f | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 |
| nematoscel sp. | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| oncaea sp. | 1.2 | 0.6 | 0.0 | 2.1 | 9.7 |
| annelida polychaeta larvae | 0.5 | 0.0 | 0.3 | 0.0 | 0.0 |
| racovitzan antarcticus s6f | 0.2 | 0.8 | 1.3 | 0.0 | 0.0 |
| racovitzan antarcticus s5 | 1.2 | 0.3 | 0.0 | 0.0 | 0.0 |
| racovitzan antarcticus .le.s4 | 0.0 | 0.9 | 0.0 | 0.0 | 0.0 |
| sagitta scrippsae | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| chord:uroc thali:salp | 0.7 | 0.0 | 0.0 | 0.1 | 0.0 |
| tomopteris septentriona | 0.1 | 0.1 | 0.1 | 0.5 | 0.0 |
| arthropoda crust:cope unidentified | 0.0 | 0.8 | 0.0 | 2.1 | 0.0 |
| limacina sp. | 0.2 | 0.0 | 2.4 | 4.2 | 6.7 |
| decapoda squid juvenile | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 |
| neocalanus plumchrus var.1/2 1/2 | 3.7 | 0.0 | 0.0 | 0.0 | 2.2 |

| | | | | | |
|---|---|---|---|---|---|
| neocalanus plumchrus var.1/2 3 | 10.1 | 0.0 | 0.0 | 0.0 | 15.8 |
| neocalanus plumchrus var.2 3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| neocalanus plumchrus var.2 4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| neocalanus plumchrus var.2 5 | 19.4 | 0.8 | 1.1 | 0.7 | 2.2 |
| "funny thing" | 1.0 | 0.7 | 6.0 | 0.3 | 0.0 |
| heterostyl sp. 6f | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| amphipoda shovel_head | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | 1-6 | 1-7 |
|---|---|---|
| parathemis sp. | 0.5 | 0.0 |
| chaetognat unidentified juveniles | 2.0 | 1.0 |
| sagitta elegans | 0.9 | 0.1 |
| eukrohnia hamata | 11.6 | 0.2 |
| euphausid larva | 17.9 | 0.0 |
| amphipoda unidentified juveniles | 2.0 | 0.0 |
| larvacean larvaceans | 0.0 | 0.8 |
| aglantha sp. | 0.8 | 0.2 |
| calanus pacificus .le.s5 | 0.0 | 0.8 |
| eucalanus bungi s3 | 0.5 | 0.2 |
| eucalanus bungi s4 | 4.5 | 0.4 |
| eucalanus bungi s5m | 5.5 | 0.2 |
| eucalanus bungi s5f | 6.0 | 0.4 |
| eucalanus bungi s6m | 0.5 | 0.0 |
| metridia sp. .le.s3 | 29.8 | 2.3 |
| metridia sp. s4 | 13.9 | 0.0 |
| metridia pacifica s5m | 41.8 | 0.0 |
| metridia pacifica s5f | 2.0 | 0.0 |
| neocalanus cristatus s3 | 0.1 | 0.0 |
| neocalanus cristatus s5 | 1.6 | 0.2 |
| neocalanus plumchrus s4 | 111.4 | 41.9 |
| neocalanus plumchrus s5 | 105.4 | 45.7 |
| oithona helgolanoica | 29.8 | 10.7 |
| oithona spinirostris | 6.0 | 0.0 |
| pseudocala sp. .le.s3 | 9.9 | 1.5 |
| pseudocala sp. s4 | 37.8 | 16.8 |
| pseudocala sp. s5m | 31.8 | 13.0 |
| pseudocala sp. s5f | 21.9 | 7.6 |
| pseudocala sp. s6m | 19.9 | 4.6 |
| pseudocala sp. s8f | 200.9 | 25.9 |
| scolecithr minor s5 | 2.0 | 0.0 |
| clausocala sp. s6f | 6.0 | 0.0 |
| clausocala sp. s6m | 21.9 | 0.0 |
| clausocala sp. s5 | 8.0 | 0.0 |
| clausocala sp. .le.s4 | 4.0 | 0.0 |

| | | |
|---|---|---|
| oliene sp. | 13.9 | 4.6 |
| oncaea sp. | 29.8 | 0.8 |
| annelida polychaeta larvae | 2.1 | 0.0 |
| racovitzan antarcticus s5 | 0.0 | 0.8 |
| arthropoda crust:cope unidentified | 17.9 | 4.6 |
| limacina sp. | 15.9 | 14.5 |
| neocalanus plumchrus var.1/2 1/2 | 35.8 | 32.0 |
| neocalanus plumchrus var.1/2 3 | 41.8 | 37.4 |
| neocalanus plumchrus var.2 4 | 2.0 | 0.8 |
| neocalanus plumchrus var.2 5 | 35.8 | 83.1 |
| "funny thing" | 2.0 | 0.0 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | 3-1 | 3-2 | 3-3 | 3-4 | 3-5 |
|---|---|---|---|---|---|
| parathemis sp. | 0.3 | 0.4 | 0.1 | 0.0 | 1.3 |
| euprimno sp. | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| chaetognat unidentified juveniles | 3.5 | 3.4 | 0.0 | 1.1 | 1.9 |
| sagitta elegans | 1.2 | 0.1 | 0.0 | 0.0 | 0.2 |
| eukrohnia hamata | 2.4 | 1.7 | 2.3 | 14.6 | 26.7 |
| unidentifi eggs | 0.0 | 6.5 | 0.0 | 0.0 | 0.0 |
| euphausid larva | 2.4 | 0.0 | 8.3 | 18.6 | 10.4 |
| amphipoda unidentified juveniles | 0.0 | 0.1 | 1.0 | 1.4 | 1.3 |
| larvacean larvaceans | 5.1 | 0.0 | 5.2 | 17.8 | 11.7 |
| aglantha sp. | 0.1 | 0.7 | 0.0 | 0.3 | 0.1 |
| proboscida sp. | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 |
| conohoecia sp. | 4.2 | 8.8 | 6.2 | 2.6 | 0.0 |
| nectophore braots | 1.3 | 0.8 | 2.1 | 0.3 | 0.0 |
| calanus tenuicornis s6f | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| eucalanus bungi s3 | 1.1 | 0.9 | 1.9 | 0.0 | 0.0 |
| eucalanus bungi s4 | 5.3 | 4.2 | 6.0 | 8.0 | 11.7 |
| eucalanus bungi s5m | 2.4 | 1.2 | 2.2 | 4.6 | 14.3 |
| eucalanus bungi s5f | 2.7 | 1.6 | 2.3 | 6.0 | 11.3 |
| eucalanus bungi s6m | 0.0 | 0.6 | 0.3 | 0.0 | 0.0 |
| eucalanus bungi s6f | 1.7 | 1.2 | 2.4 | 6.2 | 4.9 |
| euchaeta japonica s3 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| euchaeta japonica s4 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s6m | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s6f | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| metridia sp. .le.s3 | 13.5 | 11.2 | 103.5 | 15.2 | 36.4 |
| metridia sp. s4 | 3.3 | 5.8 | 28.6 | 1.7 | 1.3 |
| metridia pacifica s5m | 8.6 | 2.1 | 21.9 | 4.9 | 40.3 |
| metridia pacifica s5f | 4.4 | 2.1 | 12.5 | 1.1 | 13.0 |
| metridia pacifica s6f | 2.4 | 1.3 | 15.6 | 0.6 | 0.0 |
| neocalanus cristatus s1 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 |
| neocalanus cristatus s2 | 0.9 | 0.0 | 0.0 | 0.3 | 0.0 |
| neocalanus cristatus s3 | 0.2 | 0.0 | 0.4 | 1.1 | 0.0 |
| neocalanus cristatus s4 | 2.7 | 0.3 | 2.7 | 6.9 | 0.0 |
| neocalanus cristatus s5 | 1.7 | 3.8 | 1.6 | 3.3 | 0.3 |
| neocalanus cristatus s6m | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |

| | | | | | |
|---|---|---|---|---|---|
| neocalanus plumchrus s4 | 8.8 | 0.0 | 0.0 | 25.2 | 91.0 |
| neocalanus plumchrus s5 | 5.7 | 0.0 | 0.1 | 1.4 | 42.9 |
| oithona helgolanoica | 10.2 | 0.9 | 19.2 | 44.7 | 214.4 |
| oithona spinirostris | 1.5 | 0.1 | 14.5 | 10.3 | 1.3 |
| pseudocala sp. .le.s3 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| pseudocala sp. s4 | 5.1 | 0.0 | 0.0 | 0.0 | 13.0 |
| pseudocala sp. s5m | 0.7 | 0.0 | 0.0 | 0.0 | 13.0 |
| pseudocala sp. s5f | 1.3 | 0.0 | 0.0 | 1.7 | 6.5 |
| pseudocala sp. s6m | 0.7 | 0.0 | 0.0 | 0.3 | 9.1 |
| pseudocala sp. s6f | 3.5 | 0.0 | 0.0 | 0.6 | 18.2 |
| scolecithr minor .le.s4 | 0.0 | 0.4 | 1.0 | 1.1 | 0.0 |
| scolecithr minor s5 | 0.0 | 0.0 | 1.0 | 0.3 | 1.3 |
| scolecithr minor s6m | 0.0 | 0.0 | 0.5 | 0.0 | 1.3 |
| scolecithr minor s6f | 0.7 | 0.1 | 3.6 | 1.4 | 1.3 |
| aetideus armatus s5 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| candacia columbiae .le.s4 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 |
| clausocala sp. s6f | 0.0 | 0.0 | 0.0 | 0.9 | 3.9 |
| clausocala sp. s5 | 0.0 | 0.0 | 0.0 | 0.0 | 3.9 |
| clausocala sp. .le.s4 | 0.0 | 0.0 | 0.0 | 0.0 | 2.6 |
| clione sp. | 0.7 | 1.4 | 7.3 | 0.9 | 3.9 |
| corycaeus sp. | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 |
| crust:mala isopoda cryptoniscid | 0.2 | 0.1 | 0.5 | 0.3 | 0.0 |
| vert:fish larvae | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| gaetanus sp. .le.s4 | 0.7 | 0.9 | 0.0 | 0.0 | 0.0 |
| heterorhab tanneri s6f | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| microcalan sp. s5 | 0.9 | 0.5 | 6.2 | 2.3 | 0.0 |
| microcalan sp. .le.s4 | 0.0 | 0.1 | 0.0 | 0.3 | 0.0 |
| microcalan sp. s6f | 0.2 | 0.5 | 0.5 | 0.0 | 0.0 |
| microcalan sp. s6m | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 |
| nematoscel sp. | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 |
| oncaea sp. | 0.2 | 0.0 | 1.0 | 5.2 | 1.3 |
| annelida polychaeta larvae | 0.2 | 0.0 | 0.0 | 0.0 | 1.3 |
| racovitzan antarctious s6f | 0.4 | 0.4 | 0.0 | 0.0 | 0.0 |
| racovitzan antarctious s5 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| sagitta scrippsae | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| chord:uroc thali:salp | 0.2 | 0.5 | 0.0 | 2.7 | 0.0 |
| tomopteris septentriona | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 |
| arthropoda crust:cope unidentified | 0.0 | 0.9 | 0.5 | 0.0 | 5.2 |
| limacina sp. | 0.9 | 0.1 | 1.0 | 7.5 | 22.1 |
| phronima spp. | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| neocalanus plumchrus var.1/2 1/2 | 3.8 | 0.3 | 3.1 | 2.9 | 22.3 |
| neocalanus plumchrus var.1/2 3 | 9.3 | 0.0 | 0.0 | 17.8 | 68.9 |
| neocalanus plumchrus var.2 4 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| neocalanus plumchrus var.2 5 | 14.4 | 0.6 | 1.6 | 3.2 | 71.4 |
| "funny thing" | 0.2 | 1.3 | 2.1 | 0.3 | 0.0 |
| amphipoda shovel_head | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | 3-6 | 3-7 |
|---|---|---|
| parathemis sp. | 0.5 | 0.0 |
| chaetognat unidentified juveniles | 0.5 | 0.6 |
| sagitta elegans | 1.2 | 0.0 |
| eukrohnia hamata | 0.4 | 0.1 |
| euphausid larva | 2.1 | 0.5 |
| amphipoda unidentified juveniles | 0.0 | 0.5 |
| neotophore bracts | 0.5 | 0.0 |
| acartia longiremis s6f | 2.1 | 0.0 |
| calanus pacificus .le.s5 | 0.0 | 0.5 |
| eucalanus bungi s3 | 0.0 | 0.5 |
| eucalanus bungi s4 | 1.0 | 0.5 |
| eucalanus bungi s5m | 1.0 | 0.3 |
| eucalanus bungi s5f | 1.0 | 0.8 |
| eucalanus bungi s6f | 0.0 | 0.5 |
| metridia sp. .le.s3 | 21.2 | 2.5 |
| metridia sp. s4 | 0.0 | 0.5 |
| metridia pacifica s5m | 16.9 | 0.5 |
| metridia pacifica s5f | 4.2 | 0.5 |
| metridia pacifica s6f | 0.0 | 0.5 |
| neocalanus cristatus s5 | 0.1 | 0.1 |
| neocalanus plumchrus s4 | 59.3 | 30.0 |
| neocalanus plumchrus s5 | 65.6 | 12.0 |
| oithona helgolandica | 465.8 | 213.4 |
| oithona spinirostris | 0.0 | 1.5 |
| pseudocala sp. .le.s3 | 19.1 | 10.5 |
| pseudocala sp. s4 | 59.3 | 12.0 |
| pseudocala sp. s5m | 25.4 | 12.0 |
| pseudocala sp. s5f | 16.9 | 5.0 |
| pseudocala sp. s6m | 14.8 | 0.5 |
| pseudocala sp. s6f | 65.6 | 7.5 |
| clausocala sp. s6f | 2.1 | 0.5 |
| clausocala sp. .le.s4 | 0.0 | 0.5 |
| clione sp. | 4.2 | 1.5 |
| microcalan sp. s5 | 0.0 | 0.5 |
| arthropoda crust:cope unidentified | 0.0 | 1.5 |

| | | |
|---|---|---|
| limacina sp. | | |
| neocalanus plumchrus var.1/2 1/2 | 19.1 | 22.5 |
| neocalanus plumchrus var.1/2 3 | 61.4 | 76.9 |
| neocalanus plumchrus var.2 4 | 53.0 | 57.4 |
| neocalanus plumchrus var.2 5 | 0.0 | 2.0 |
| | 152.4 | 49.4 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | 5-1 | 5-2 | 5-3 | 5-4 | 5-5 |
|---|---|---|---|---|---|
| parathemis sp. | 0.6 | 0.3 | 0.1 | 0.1 | 1.2 |
| euprimno sp. | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| cyphocaris sp. | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| chaetognat unidentified juveniles | 1.6 | 1.0 | 1.9 | 3.1 | 2.1 |
| sagitta elegans | 0.1 | 0.1 | 0.1 | 0.0 | 0.3 |
| eukrohnia hamata | 4.2 | 1.8 | 2.3 | 6.6 | 14.4 |
| copepod nauplii | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| euphausid larva | 3.3 | 0.2 | 7.5 | 24.5 | 23.3 |
| amphipoda unidentified juveniles | 0.2 | 0.2 | 0.0 | 0.2 | 1.3 |
| euphausia pacifica | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| larvacean larvaceans | 0.9 | 0.1 | 0.3 | 0.5 | 0.0 |
| aglantha sp. | 0.4 | 0.0 | 0.3 | 0.7 | 0.3 |
| conchoecia sp. | 9.8 | 3.5 | 2.5 | 1.4 | 2.5 |
| nectophore bracts | 1.4 | 0.3 | 1.7 | 0.0 | 0.0 |
| acartia longiremis s6f | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 |
| calanus pacificus .le.s5 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| calanus tenuicornis s5 | 0.2 | 0.0 | 0.6 | 1.4 | 0.0 |
| calanus tenuicornis s6m | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| calanus tenuicornis s6f | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| eucalanus bungi s3 | 2.1 | 1.0 | 2.2 | 4.1 | 0.5 |
| eucalanus bungi s4 | 10.3 | 2.0 | 9.2 | 20.4 | 27.4 |
| eucalanus bungi s5m | 6.3 | 1.1 | 6.7 | 4.5 | 13.7 |
| eucalanus bungi s5f | 6.1 | 0.7 | 8.3 | 9.5 | 12.2 |
| eucalanus bungi s6m | 0.7 | 0.2 | 0.0 | 0.0 | 0.0 |
| eucalanus bungi s6f | 3.8 | 1.1 | 5.1 | 4.5 | 6.9 |
| euchaeta japonica s1/2 | 0.0 | 0.1 | 0.3 | 0.0 | 0.0 |
| euchaeta japonica s4 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s5m | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s5f | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s6m | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s6f | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 |
| metridia sp. .le.s3 | 7.7 | 8.5 | 78.3 | 27.3 | 9.1 |
| metridia sp. s4 | 4.7 | 2.8 | 12.5 | 5.9 | 0.0 |
| metridia pacifica s5m | 11.0 | 4.1 | 25.3 | 28.2 | 4.1 |
| metridia pacifica s5f | 4.9 | 1.8 | 10.3 | 8.2 | 2.0 |

| | | | | | |
|---|---|---|---|---|---|
| metridia pacifica s6m | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| metridia pacifica s6f | 6.1 | 1.3 | 2.2 | 4.1 | 7.6 |
| neocalanus cristatus s1 | 0.7 | 0.0 | 0.0 | 5.9 | 2.1 |
| neocalanus cristatus s2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.5 |
| neocalanus cristatus s3 | 0.0 | 0.0 | 0.3 | 2.7 | 12.2 |
| neocalanus cristatus s4 | 2.8 | 0.7 | 6.1 | 5.8 | 16.0 |
| neocalanus cristatus s5 | 3.6 | 2.2 | 3.8 | 0.5 | 3.1 |
| neocalanus plumchrus s4 | 17.7 | 0.1 | 0.3 | 0.4 | 33.5 |
| neocalanus plumchrus s5 | 15.6 | 0.2 | 1.1 | 2.0 | 24.9 |
| oithona helgolanoica | 0.7 | 0.5 | 16.4 | 43.6 | 44.1 |
| oithona spinirostris | 4.0 | 0.2 | 22.8 | 91.3 | 19.8 |
| pseudocala sp. .le.s3 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 |
| pseudocala sp. s4 | 6.8 | 0.0 | 0.0 | 0.0 | 3.6 |
| pseudocala sp. s5m | 2.3 | 0.0 | 0.0 | 0.0 | 2.0 |
| pseudocala sp. s5f | 2.6 | 0.0 | 0.6 | 0.0 | 4.6 |
| pseudocala sp. s6m | 0.2 | 0.1 | 0.0 | 0.9 | 1.0 |
| pseudocala sp. s6f | 11.2 | 0.1 | 0.0 | 2.7 | 5.6 |
| scolecithr minor .le.s4 | 1.2 | 0.1 | 0.8 | 13.2 | 5.1 |
| scolecithr minor s5 | 1.2 | 0.1 | 1.1 | 6.4 | 2.0 |
| scolecithr minor s6m | 0.2 | 0.0 | 0.6 | 0.0 | 0.5 |
| scolecithr minor s6f | 2.3 | 0.2 | 1.1 | 4.1 | 0.5 |
| aetideus armatus s6f | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| aetideus armatus s5 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| candacia columbiae s6f | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 |
| candacia columbiae s6m | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| candacia columbiae .le.s4 | 0.0 | 0.7 | 0.0 | 0.0 | 0.0 |
| clausocala sp. s6f | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 |
| clione sp. | 1.2 | 0.3 | 15.3 | 1.4 | 0.5 |
| crust:mala isopoda cryptoniscid | 0.0 | 0.0 | 1.1 | 0.0 | 0.0 |
| gaetanus sp. .le.s4 | 0.7 | 0.5 | 0.0 | 0.0 | 0.0 |
| heterorhab sp. s5 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| heterorhab tanneri s6f | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 |
| microcalan sp. s5 | 1.2 | 0.3 | 5.3 | 5.0 | 0.5 |
| microcalan sp. s6f | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| nematoscel sp. | 0.1 | 0.0 | 0.2 | 0.0 | 0.0 |
| oncaea sp. | 0.7 | 0.2 | 0.6 | 3.6 | 1.0 |
| racovitzan antarctious s6f | 0.7 | 0.6 | 0.0 | 0.0 | 0.0 |
| racovitzan antarctious s5 | 0.7 | 0.1 | 0.0 | 0.0 | 0.0 |
| racovitzan antarctious .le.s4 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| sagitta scrippsae | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| chord:uroc thali:salp | 0.2 | 0.3 | 0.0 | 0.0 | 0.1 |
| tomopteris septentriona | 0.1 | 0.1 | 0.3 | 0.1 | 0.0 |
| arthropoda crust:cope unidentified | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 |
| limacina sp. | 1.6 | 0.0 | 1.7 | 3.6 | 19.3 |
| decapoda squid juvenile | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| neocalanus plumchrus var.1/2 1/2 | 2.8 | 0.0 | 1.1 | 0.0 | 7.3 |
| neocalanus plumchrus var.1/2 3 | 11.9 | 0.1 | 0.0 | 4.5 | 27.4 |
| neocalanus plumchrus var.2 5 | 36.4 | 0.8 | 2.2 | 3.8 | 15.7 |
| "funny thing" | 0.2 | 1.0 | 5.3 | 0.5 | 0.0 |

| | | | | | |
|---|---|---|---|---|---|
| amphipoda shovel_head | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | 5-6 |
|---|---|
| parathemis sp. | 0.4 |
| euprimno sp. | 0.2 |
| sagitta elegans | 0.4 |
| eukrohnia hamata | 0.4 |
| euphausid larva | 1.0 |
| amphipoda unidentified juveniles | 0.5 |
| larvacean larvaceans | 20.8 |
| aglantha sp. | 0.1 |
| eucalanus bungi s4 | 0.5 |
| eucalanus bungi s5m | 0.5 |
| eucalanus bungi s5f | 0.5 |
| eucalanus bungi s6f | 0.2 |
| metridia sp. .le.s3 | 11.9 |
| metridia pacifica s5m | 17.8 |
| metridia pacifica s5f | 5.0 |
| metridia pacifica s6f | 6.9 |
| neocalanus cristatus s4 | 0.2 |
| neocalanus cristatus s5 | 0.1 |
| neocalanus plumohrus s4 | 26.8 |
| neocalanus plumohrus s5 | 63.4 |
| oithona helgolanoica | 169.5 |
| pseudocala sp. .le.s3 | 9.9 |
| pseudocala sp. s4 | 19.8 |
| pseudocala sp. s5m | 8.9 |
| pseudocala sp. s5f | 6.9 |
| pseudocala sp. s6m | 4.0 |
| pseudocala sp. s6f | 24.8 |
| scolecithr minor s5 | 1.0 |
| scolecithr minor s6m | 1.0 |
| scolecithr minor s6f | 1.0 |
| clausocala sp. s5 | 3.0 |
| clausocala sp. .le.s4 | 2.0 |
| olione sp. | 1.9 |
| chord:uroc thali:salp | 2.0 |
| arthropoda crust:cope unidentified | 2.0 |

| | |
|---|---|
| limacina sp. | 1.7 |
| neocalanus plumohrus var.1/2 1/2 | 41.6 |
| neocalanus plumohrus var.1/2 3 | 31.7 |
| neocalanus plumohrus var.2 5 | 92.2 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | 6-1 | 6-2 | 6-3 | 6-4 | 6-5 |
|---|---|---|---|---|---|
| parathemis sp. | 0.2 | 0.1 | 0.1 | 0.3 | 0.2 |
| euprimno sp. | 0.1 | 0.1 | 0.3 | 0.2 | 0.0 |
| cyphocaris sp. | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| chaetognat unidentified juveniles | 1.8 | 2.4 | 1.8 | 1.5 | 4.4 |
| sagitta elegans | 0.1 | 0.1 | 0.1 | 0.3 | 0.0 |
| eukrohnia hamata | 3.0 | 6.0 | 2.6 | 10.9 | 20.3 |
| unidentifi eggs | 0.0 | 2.4 | 0.0 | 0.0 | 0.0 |
| euphausid larva | 3.2 | 0.2 | 10.2 | 10.8 | 21.1 |
| crust:mala euphausiac juveniles | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| amphipoda unidentified juveniles | 0.2 | 0.4 | 0.9 | 0.8 | 4.4 |
| euphausia pacifica | 0.1 | 0.0 | 0.0 | 0.1 | 1.2 |
| thysanoess spinifera | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| larvacean larvaceans | 4.2 | 0.4 | 3.0 | 6.2 | 11.4 |
| aglantha sp. | 0.3 | 0.0 | 0.1 | 0.1 | 0.1 |
| conchoecia sp. | 4.6 | 10.1 | 3.9 | 6.9 | 0.0 |
| nectophore bracts | 1.6 | 2.3 | 3.3 | 0.8 | 0.0 |
| acartia longiremis s6f | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| calanus pacificus .le.s5 | 0.2 | 0.1 | 0.0 | 0.8 | 0.0 |
| calanus tenuicornis .le.s4 | 0.0 | 0.0 | 0.6 | 0.8 | 0.0 |
| calanus tenuicornis s5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 |
| eucalanus bungi s3 | 0.5 | 0.7 | 0.9 | 3.9 | 2.6 |
| eucalanus bungi s4 | 7.8 | 3.4 | 12.1 | 32.3 | 48.3 |
| eucalanus bungi s5m | 6.2 | 1.8 | 6.9 | 15.4 | 23.7 |
| eucalanus bungi s5f | 4.2 | 2.6 | 8.3 | 23.8 | 45.8 |
| eucalanus bungi s6m | 0.0 | 1.3 | 0.0 | 0.0 | 0.0 |
| eucalanus bungi s6f | 2.5 | 1.8 | 8.0 | 15.8 | 16.0 |
| euchaeta japonica s1/2 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s3 | 0.0 | 0.1 | 0.3 | 0.0 | 0.0 |
| euchaeta japonica s5m | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 |
| euchaeta japonica s5f | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 |
| euchaeta japonica s6m | 0.1 | 0.1 | 0.2 | 0.1 | 0.0 |
| euchaeta japonica s6f | 0.1 | 0.2 | 0.1 | 0.1 | 0.0 |
| metridia sp. .le.s3 | 5.8 | 6.6 | 76.3 | 67.8 | 37.8 |
| metridia sp. s4 | 8.3 | 4.5 | 29.0 | 9.2 | 0.9 |
| metridia pacifica s5m | 3.7 | 2.4 | 13.6 | 13.8 | 9.7 |

| | | | | | |
|---|---|---|---|---|---|
| metridia pacifica s5f | 3.4 | 1.3 | 5.1 | 6.2 | 5.3 |
| metridia pacifica s6f | 3.7 | 2.3 | 12.4 | 25.4 | 21.1 |
| neocalanus cristatus s1 | 0.0 | 0.0 | 0.0 | 12.3 | 7.0 |
| neocalanus cristatus s2 | 0.7 | 0.0 | 0.0 | 0.0 | 1.8 |
| neocalanus cristatus s3 | 0.4 | 0.0 | 0.3 | 1.9 | 9.7 |
| neocalanus cristatus s4 | 0.8 | 0.6 | 1.2 | 2.6 | 19.3 |
| neocalanus cristatus s5 | 2.0 | 3.3 | 1.9 | 0.1 | 5.1 |
| neocalanus plumchrus s4 | 9.5 | 0.0 | 0.0 | 1.5 | 14.9 |
| neocalanus plumchrus s5 | 2.4 | 0.2 | 0.6 | 0.0 | 3.5 |
| oithona helgolanoica | 1.1 | 1.2 | 13.9 | 38.5 | 99.3 |
| oithona spinirostris | 7.6 | 2.6 | 25.9 | 108.5 | 115.1 |
| pseudocala sp. .le.s3 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| pseudocala sp. s4 | 2.6 | 0.0 | 0.0 | 0.0 | 0.0 |
| pseudocala sp. s5m | 1.6 | 0.1 | 0.0 | 0.8 | 6.2 |
| pseudocala sp. s5f | 1.4 | 0.0 | 0.0 | 0.8 | 2.6 |
| pseudocala sp. s6m | 0.9 | 0.0 | 0.0 | 0.0 | 3.5 |
| pseudocala sp. s6f | 5.6 | 0.0 | 0.0 | 0.0 | 7.9 |
| scolecithr minor .le.s4 | 1.6 | 0.1 | 1.5 | 12.3 | 6.2 |
| scolecithr minor s5 | 0.7 | 0.5 | 1.2 | 4.6 | 2.6 |
| scolecithr minor s6m | 0.2 | 0.0 | 1.2 | 1.5 | 0.0 |
| scolecithr minor s6f | 0.2 | 0.4 | 3.9 | 3.9 | 3.5 |
| aetideus armatus s6f | 0.2 | 0.0 | 0.3 | 0.0 | 0.0 |
| aetideus armatus s6m | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| candacia columbiae s6f | 0.0 | 0.1 | 0.0 | 0.1 | 0.1 |
| candacia columbiae s6m | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 |
| candacia columbiae s5 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 |
| candacia columbiae .le.s4 | 0.0 | 0.0 | 0.6 | 0.8 | 0.0 |
| clausocala sp. s6f | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| clausocala sp. s5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 |
| clione sp. | 0.9 | 0.3 | 10.0 | 1.5 | 0.9 |
| coryoaeus sp. | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 |
| echinoplut larvae | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 |
| vert:fish larvae | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 |
| gaetanus sp. s6f | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| gaetanus sp. .le.s4 | 0.7 | 0.8 | 0.0 | 0.0 | 0.0 |
| heterorhab tanneri s6f | 0.1 | 0.1 | 0.3 | 0.0 | 0.0 |
| heterorhab tanneri s6m | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| lucicutia sp. s5 | 0.0 | 0.0 | 0.0 | 1.5 | 0.0 |
| microcalan sp. s5 | 0.9 | 0.7 | 5.1 | 17.7 | 8.8 |
| microcalan sp. s6f | 0.0 | 1.1 | 0.0 | 0.0 | 0.0 |
| nematoscel sp. | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 |
| onoaea sp. | 0.0 | 0.1 | 0.0 | 0.0 | 4.4 |
| pleuromamm sp. | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| pleuromamm scutullata s6f | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| pleuromamm scutullata s6m | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| pleuromamm scutullata s5 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| annelida polychaeta larvae | 0.0 | 0.1 | 0.6 | 0.0 | 1.8 |
| racovitzan antarctious s6f | 0.7 | 0.9 | 0.0 | 0.0 | 0.0 |
| racovitzan antarctious s5 | 0.7 | 0.5 | 0.0 | 0.0 | 0.0 |

| | | | | | |
|---|---|---|---|---|---|
| racovitzan antarcticus .le.s4 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| sagitta scrippsae | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| chord:uroc thali:salp | 0.6 | 0.3 | 0.0 | 0.0 | 0.0 |
| tomopteris septentriona | 0.1 | 0.0 | 1.2 | 3.9 | 0.2 |
| arthropoda crust:cope unidentified | 1.2 | 0.1 | 0.0 | 0.0 | 1.8 |
| limacina sp. | 0.2 | 0.1 | 3.6 | 11.5 | 14.1 |
| decapoda squid juvenile | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 |
| pleuromamm sp.(3) .le.4 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 |
| pleuromamm sp.(3) 6f | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| neocalanus plumchrus var.1/2 1/2 | 1.1 | 0.0 | 0.3 | 0.0 | 0.0 |
| neocalanus plumchrus var.1/2 3 | 7.4 | 0.0 | 0.0 | 3.9 | 7.0 |
| neocalanus plumchrus var.2 4 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| neocalanus plumchrus var.2 5 | 7.9 | 0.8 | 0.6 | 0.4 | 0.0 |
| "funny thing" | 0.2 | 0.8 | 6.0 | 1.5 | 0.0 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | 6-6 | 6-7 |
|---|---|---|
| parathemis sp. | 0.7 | 0.0 |
| chaetognat unidentified juveniles | 0.9 | 0.0 |
| sagitta elegans | 0.1 | 0.0 |
| eukrohnia hamata | 2.6 | 0.0 |
| euphausid larva | 5.3 | 0.0 |
| amphipoda unidentified juveniles | 0.9 | 0.0 |
| euphausia pacifica | 0.6 | 0.0 |
| larvacean larvaceans | 8.8 | 0.0 |
| aglantha sp. | 3.0 | 0.0 |
| eucalanus bungi s3 | 0.9 | 0.0 |
| eucalanus bungi s4 | 5.2 | 0.0 |
| eucalanus bungi s5m | 4.3 | 0.0 |
| eucalanus bungi s5f | 3.5 | 0.0 |
| eucalanus bungi s6f | 1.1 | 0.0 |
| metridia sp. .le.s3 | 88.3 | 0.0 |
| metridia sp. s4 | 1.8 | 0.0 |
| metridia pacifica s5m | 8.8 | 0.0 |
| metridia pacifica s5f | 1.8 | 0.0 |
| metridia pacifica s6f | 1.8 | 0.0 |
| neocalanus cristatus s3 | 1.8 | 0.0 |
| neocalanus cristatus s4 | 1.7 | 0.0 |
| neocalanus cristatus s6f | 1.3 | 0.0 |
| neocalanus plumchrus s4 | 51.1 | 0.0 |
| neocalanus plumchrus s5 | 40.8 | 0.0 |
| oithona helgolanoica | 305.1 | 0.0 |
| oithona spinirostris | 12.3 | 0.0 |
| pseudocala sp. .le.s3 | 12.3 | 0.0 |
| pseudocala sp. s5m | 31.7 | 0.0 |
| pseudocala sp. s5f | 28.2 | 0.0 |
| pseudocala sp. s6m | 24.7 | 0.0 |
| pseudocala sp. s6f | 49.4 | 0.0 |
| scolecithr minor .le.s4 | 3.5 | 0.0 |
| scolecithr minor s5 | 5.3 | 0.0 |
| scolecithr minor s6f | 1.8 | 0.0 |
| clausocala sp. s5 | 1.8 | 0.0 |

| | | |
|---|---|---|
| oikopleura sp. | 3.5 | 0.0 |
| chord:uroo thali:salp | 1.1 | 0.0 |
| tomopteris septentriona | 0.1 | 0.0 |
| arthropoda crust:cope unidentified | 5.3 | 0.0 |
| limacina sp. | 12.3 | 0.0 |
| neocalanus plumchrus var.1/2 1/2 | 68.8 | 0.0 |
| neocalanus plumchrus var.1/2 3 | 60.0 | 0.0 |
| neocalanus plumchrus var.2 5 | 88.5 | 0.0 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | 7-1 | 7-2 | 7-3 | 7-4 | 7-5 |
|---|---|---|---|---|---|
| parathemis sp. | 0.4 | 0.0 | 0.0 | 0.1 | 0.2 |
| euprimno sp. | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| cyphocaris sp. | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 |
| chaetognat unidentified juveniles | 3.2 | 3.6 | 0.7 | 1.6 | 0.0 |
| sagitta elegans | 0.1 | 0.1 | 0.0 | 0.0 | 1.5 |
| eukrohnia hamata | 8.1 | 7.8 | 2.5 | 8.9 | 0.1 |
| euphausid larva | 1.8 | 0.1 | 1.2 | 11.3 | 3.5 |
| decapod larva | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| amphipoda unidentified juveniles | 0.0 | 0.6 | 1.7 | 1.6 | 0.9 |
| euphausia pacifica | 5.0 | 0.1 | 0.1 | 0.0 | 3.0 |
| larvacean larvaceans | 0.9 | 0.6 | 0.3 | 0.4 | 0.0 |
| aglantha sp. | 0.1 | 0.1 | 0.1 | 0.0 | 3.3 |
| conchoecia sp. | 9.5 | 17.0 | 19.3 | 11.8 | 0.0 |
| nectophore bracts | 0.2 | 0.5 | 2.6 | 2.4 | 0.0 |
| calanus pacificus .le.s5 | 0.0 | 0.1 | 0.0 | 0.0 | 3.5 |
| eucalanus bungi s3 | 1.4 | 0.5 | 0.8 | 3.2 | 0.0 |
| eucalanus bungi s4 | 11.1 | 6.3 | 5.2 | 25.3 | 0.0 |
| eucalanus bungi s5m | 2.3 | 0.4 | 2.3 | 6.9 | 1.7 |
| eucalanus bungi s5f | 5.9 | 1.6 | 6.6 | 9.5 | 0.0 |
| eucalanus bungi s6m | 0.7 | 1.8 | 0.0 | 0.0 | 0.0 |
| eucalanus bungi s6f | 3.8 | 1.1 | 9.6 | 8.7 | 0.0 |
| euchaeta japonica s1/2 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s3 | 0.0 | 0.3 | 0.1 | 0.0 | 0.0 |
| euchaeta japonica s4 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 |
| euchaeta japonica s5m | 0.0 | 0.1 | 0.0 | 0.0 | 0.2 |
| euchaeta japonica s5f | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| euchaeta japonica s6m | 0.1 | 0.1 | 0.1 | 0.2 | 0.4 |
| euchaeta japonica s6f | 0.2 | 0.1 | 0.1 | 0.1 | 1.2 |
| metridia sp. .le.s3 | 3.2 | 3.6 | 11.2 | 9.9 | 15.9 |
| metridia sp. s4 | 2.9 | 1.1 | 4.0 | 3.8 | 5.3 |
| metridia pacifica s5m | 1.3 | 0.3 | 2.3 | 0.6 | 3.5 |
| metridia pacifica s5f | 0.9 | 0.1 | 0.9 | 0.8 | 1.8 |
| metridia pacifica s6f | 1.6 | 0.1 | 0.7 | 1.4 | 3.5 |
| neocalanus cristatus s1 | 0.0 | 0.0 | 0.0 | 3.4 | 0.0 |
| neocalanus cristatus s2 | 0.0 | 0.0 | 0.0 | 3.2 | 0.0 |

| | | | | | |
|---|---|---|---|---|---|
| neocalanus cristatus s3 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| neocalanus cristatus s4 | 1.2 | 1.2 | 1.0 | 3.0 | 0.0 |
| neocalanus cristatus s5 | 2.6 | 2.3 | 0.4 | 3.6 | 0.3 |
| neocalanus plumchrus s4 | 15.5 | 0.0 | 0.2 | 1.2 | 88.4 |
| neocalanus plumchrus s5 | 6.7 | 0.1 | 0.2 | 0.4 | 69.0 |
| oithona helgolanoica | 0.7 | 2.9 | 2.1 | 14.0 | 311.3 |
| oithona spinirostris | 2.5 | 2.3 | 20.7 | 44.4 | 3.5 |
| pseudocala sp. .le.s3 | 0.0 | 0.0 | 0.0 | 0.0 | 14.2 |
| pseudocala sp. s4 | 2.3 | 0.0 | 0.0 | 0.4 | 42.5 |
| pseudocala sp. s5m | 2.0 | 0.1 | 0.0 | 0.2 | 15.9 |
| pseudocala sp. s5f | 2.1 | 0.0 | 0.0 | 0.6 | 1.8 |
| pseudocala sp. s6m | 0.2 | 0.0 | 0.0 | 0.4 | 21.2 |
| pseudocala sp. s6f | 4.6 | 0.0 | 0.5 | 1.4 | 49.5 |
| scolecithr minor .le.s4 | 0.9 | 0.1 | 1.1 | 6.7 | 0.0 |
| scolecithr minor s5 | 0.7 | 0.3 | 0.0 | 4.5 | 0.0 |
| scolecithr minor s6m | 0.0 | 0.0 | 0.0 | 1.4 | 0.0 |
| scolecithr minor s6f | 1.1 | 0.5 | 0.9 | 3.8 | 1.8 |
| aetideus armatus s6f | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 |
| candacia bipinnata .le.s4 | 0.0 | 0.0 | 0.9 | 0.0 | 0.0 |
| candacia columbiae s6f | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 |
| candacia columbiae s6m | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 |
| candacia columbiae .le.s4 | 0.0 | 0.4 | 0.0 | 1.6 | 0.0 |
| chiridius gracilis .le.s4 | 0.0 | 0.0 | 0.0 | 0.0 | 1.8 |
| clausocala sp. s6f | 0.0 | 0.0 | 0.1 | 0.2 | 0.0 |
| clausocala sp. s5 | 0.2 | 0.0 | 0.0 | 0.4 | 1.8 |
| clausocala sp. .le.s4 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| clione sp. | 0.5 | 1.2 | 7.2 | 2.6 | 1.8 |
| corycaeus sp. | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| crust:mala isopoda cryptoniscid | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| vert:fish larvae | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| gaetanus sp. s6f | 0.0 | 0.2 | 3.5 | 0.4 | 0.0 |
| gaetanus sp. s5 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 |
| gaetanus sp. .le.s4 | 2.4 | 0.9 | 0.0 | 0.0 | 0.0 |
| heterorhab sp. s6f | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| heterorhab tanneri s6f | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 |
| heterorhab tanneri s6m | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| hyperia sp. | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| lucicutia sp. s5 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| microcalan sp. s5 | 0.0 | 1.0 | 2.1 | 3.2 | 0.0 |
| microcalan sp. s6f | 0.0 | 0.4 | 0.1 | 0.0 | 0.0 |
| pera:mysid mysid | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| deca:natan natantia | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 |
| nematoscel sp. | 0.1 | 0.1 | 0.1 | 0.1 | 1.7 |
| oncaea sp. | 1.6 | 1.4 | 0.1 | 0.8 | 0.0 |
| pleuromamm sp. | 0.0 | 0.1 | 0.2 | 0.0 | 0.0 |
| pleuromamm scutullata s6f | 1.1 | 1.6 | 5.6 | 0.0 | 0.0 |
| pleuromamm scutullata s6m | 0.0 | 0.2 | 0.1 | 0.0 | 0.0 |
| pleuromamm scutullata s5 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| pleuromamm scutullata .le.s4 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 |

| | | | | | |
|---|---|---|---|---|---|
| podon sp. | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| annelida polychaeta larvae | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 |
| racovitzan antarctious s6f | 0.9 | 0.9 | 0.0 | 0.0 | 0.0 |
| racovitzan antarctious s5 | 0.4 | 0.7 | 0.1 | 0.0 | 0.0 |
| racovitzan antarctious .le.s4 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| sagitta scrippsae | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| chord:uroc thali:salp | 0.9 | 0.0 | 0.0 | 0.2 | 0.5 |
| tessarabra oculatus | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 |
| tomopteris septentriona | 0.1 | 0.1 | 0.1 | 0.3 | 0.1 |
| arthropoda crust:cope unidentified | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| arthropoda euphausid unidentified | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| limacina sp. | 0.7 | 0.0 | 1.0 | 2.6 | 3.5 |
| decapoda squid juvenile | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 |
| pleuromamm sp.(3) 6f | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 |
| lophothrix sp. | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| microsetel spp. | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| amphi:hype hyperii(1) | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |
| neocalanus spp. s1/2 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 |
| neocalanus plumchrus var.1/2 1/2 | 0.0 | 0.0 | 0.5 | 0.0 | 69.0 |
| neocalanus plumchrus var.1/2 3 | 11.8 | 0.1 | 0.2 | 0.2 | 91.9 |
| neocalanus plumchrus var.2 4 | 0.0 | 0.0 | 0.0 | 0.0 | 1.8 |
| neocalanus plumchrus var.2 5 | 11.6 | 0.3 | 0.8 | 0.6 | 91.9 |
| "funny thing" | 0.0 | 1.1 | 5.3 | 1.4 | 0.0 |
| amphipoda shovel_head | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | 7-6 | 7-7 |
|---|---|---|
| parathemis sp. | 2.5 | 0.0 |
| sagitta elegans | 1.5 | 0.0 |
| amphipoda unidentified juveniles | 7.2 | 0.0 |
| euphausia pacifica | 3.6 | 0.0 |
| thysanoess spinifera | 0.1 | 0.0 |
| aglantha sp. | 2.2 | 0.0 |
| acartia longiremis s6m | 1.8 | 0.0 |
| calanus pacificus .le.s5 | 3.6 | 0.0 |
| euchaeta japonica s6m | 1.0 | 0.0 |
| euchaeta japonica s6f | 1.1 | 0.0 |
| metridia sp. .le.s3 | 16.3 | 0.0 |
| metridia sp. s4 | 1.8 | 0.0 |
| metridia pacifica s5m | 3.6 | 0.0 |
| metridia pacifica s6f | 3.6 | 0.0 |
| neocalanus cristatus s5 | 0.1 | 0.0 |
| neocalanus plumchrus s4 | 92.3 | 0.0 |
| neocalanus plumchrus s5 | 83.2 | 0.0 |
| oithona helgolandica | 608.0 | 0.0 |
| pseudocala sp. .le.s3 | 41.6 | 0.0 |
| pseudocala sp. s4 | 79.6 | 0.0 |
| pseudocala sp. s5m | 32.6 | 0.0 |
| pseudocala sp. s5f | 14.5 | 0.0 |
| pseudocala sp. s6m | 19.9 | 0.0 |
| pseudocala sp. s6f | 117.6 | 0.0 |
| aegina sp. | 0.1 | 0.0 |
| nematoscel sp. | 0.5 | 0.0 |
| chord:uroc thali:salp | 0.5 | 0.0 |
| tomopteris septentriona | 2.3 | 0.0 |
| arthropoda crust:cope unidentified | 1.8 | 0.0 |
| limacina sp. | 1.8 | 0.0 |
| neocalanus plumchrus var.1/2 1/2 | 59.7 | 0.0 |
| neocalanus plumchrus var.1/2 3 | 68.8 | 0.0 |
| neocalanus plumchrus var.2 5 | 66.9 | 0.0 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | 8-1 | 8-2 | 8-3 | 8-4 | 8-5 |
|---|---|---|---|---|---|
| parathemis sp. | 0.2 | 0.1 | 0.0 | 0.1 | 0.7 |
| euprimno sp. | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 |
| cyphocaris sp. | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 |
| chaetognat unidentified juveniles | 0.4 | 6.4 | 0.2 | 0.8 | 0.0 |
| sagitta elegans | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 |
| eukrohnia hamata | 3.2 | 6.3 | 0.2 | 2.5 | 3.0 |
| euphausid larva | 1.5 | 0.2 | 1.3 | 18.3 | 9.0 |
| amphipoda unidentified juveniles | 0.9 | 0.2 | 1.2 | 1.3 | 0.6 |
| euphausia pacifica | 0.1 | 0.0 | 0.0 | 0.0 | 0.3 |
| thysanoess spinifera | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 |
| larvacean larvaceans | 1.2 | 0.9 | 4.1 | 6.5 | 0.0 |
| aglantha sp. | 0.4 | 0.1 | 0.1 | 0.2 | 0.3 |
| oonohoecia sp. | 8.3 | 12.5 | 3.9 | 3.5 | 0.0 |
| nectophore braots | 2.7 | 1.7 | 3.7 | 7.3 | 0.0 |
| calanus pacificus .le.s5 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| eucalanus bungi s3 | 2.8 | 1.6 | 0.9 | 1.9 | 3.4 |
| eucalanus bungi s4 | 7.8 | 11.7 | 2.6 | 10.5 | 19.0 |
| eucalanus bungi s5m | 1.9 | 1.2 | 1.8 | 10.8 | 18.5 |
| eucalanus bungi s5f | 3.3 | 1.7 | 2.6 | 9.4 | 24.6 |
| eucalanus bungi s6m | 1.3 | 1.2 | 0.0 | 0.0 | 0.0 |
| eucalanus bungi s6f | 2.3 | 1.6 | 4.2 | 15.4 | 7.9 |
| euchaeta japonica s1/2 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s3 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s4 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s5m | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |
| euchaeta japonica s5f | 0.0 | 0.1 | 0.0 | 0.2 | 0.0 |
| euchaeta japonica s6m | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| euchaeta japonica s6f | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 |
| metridia sp. .le.s3 | 6.4 | 5.6 | 4.9 | 17.8 | 35.3 |
| metridia sp. s4 | 3.3 | 2.0 | 2.7 | 1.3 | 9.0 |
| metridia pacifica s5m | 1.2 | 0.5 | 0.3 | 1.1 | 1.7 |
| metridia pacifica s5f | 0.3 | 0.3 | 0.7 | 0.5 | 1.7 |
| metridia pacifica s6f | 2.1 | 0.9 | 3.7 | 4.9 | 5.0 |
| neocalanus cristatus s1 | 0.0 | 0.0 | 0.7 | 4.0 | 0.6 |
| neocalanus cristatus s2 | 0.2 | 0.0 | 0.3 | 1.9 | 2.2 |

| | | | | | |
|---|---|---|---|---|---|
| neocalanus cristatus s3 | 0.0 | 0.0 | 0.2 | 1.9 | 3.4 |
| neocalanus cristatus s4 | 0.7 | 0.9 | 1.6 | 0.8 | 5.0 |
| neocalanus cristatus s5 | 1.9 | 2.0 | 0.5 | 0.8 | 2.1 |
| neocalanus plumchrus s4 | 4.5 | 0.1 | 0.4 | 0.3 | 15.7 |
| neocalanus plumchrus s5 | 1.8 | 0.0 | 0.1 | 0.0 | 2.2 |
| oithona helgolanoica | 1.8 | 0.2 | 3.5 | 12.4 | 161.7 |
| oithona spinirostris | 1.9 | 2.1 | 7.4 | 37.4 | 7.8 |
| pseudocala sp. .le.s3 | 1.0 | 0.0 | 0.0 | 0.0 | 3.9 |
| pseudocala sp. s4 | 8.1 | 0.0 | 0.2 | 0.0 | 6.1 |
| pseudocala sp. s5m | 2.8 | 0.0 | 0.0 | 0.0 | 2.2 |
| pseudocala sp. s5f | 1.6 | 0.0 | 0.0 | 0.0 | 3.9 |
| pseudocala sp. s6m | 2.4 | 0.0 | 0.1 | 0.0 | 1.7 |
| pseudocala sp. s6f | 8.4 | 0.0 | 0.2 | 0.5 | 10.1 |
| scolecithr minor .le.s4 | 0.6 | 0.3 | 0.5 | 4.0 | 3.9 |
| scolecithr minor s5 | 0.7 | 0.4 | 0.3 | 0.8 | 0.0 |
| scolecithr minor s6m | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| scolecithr minor s6f | 0.5 | 0.4 | 0.4 | 2.7 | 3.9 |
| aegina sp. | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| aetideus armatus s6f | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| aetideus armatus s5 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| candacia columbiae .le.s4 | 0.0 | 0.5 | 0.8 | 1.3 | 0.0 |
| clione sp. | 1.3 | 1.9 | 1.7 | 0.5 | 0.6 |
| crust:mala isopoda cryptoniscid | 0.2 | 0.2 | 0.6 | 0.0 | 0.0 |
| vert:fish larvae | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 |
| gaetanus sp. s6f | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 |
| gaetanus sp. s5 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| gaetanus sp. .le.s4 | 1.0 | 1.4 | 0.1 | 0.0 | 0.0 |
| heterorhab sp. s6f | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| heterorhab sp. s6m | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| heterorhab tanneri s6f | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 |
| heterorhab tanneri s6m | 0.0 | 0.2 | 0.1 | 0.0 | 0.0 |
| heterorhab tanneri s5 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| microcalan sp. s5 | 0.3 | 1.3 | 0.4 | 10.2 | 2.8 |
| microcalan sp. .le.s4 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| microcalan sp. s6f | 0.2 | 0.7 | 0.1 | 0.0 | 0.0 |
| microcalan sp. s6m | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| deca:natan natantia | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| nematoscel sp. | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 |
| oncaea sp. | 1.3 | 1.8 | 0.1 | 1.1 | 3.9 |
| pleuromamm sp. | 0.1 | 0.7 | 0.0 | 0.0 | 0.0 |
| pleuromamm scutullata s6f | 0.3 | 0.3 | 0.1 | 0.0 | 0.0 |
| pleuromamm scutullata s6m | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| annelida polychaeta larvae | 0.0 | 0.1 | 0.1 | 0.5 | 0.0 |
| racovitzan antarctious s6f | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| racovitzan antarctious s5 | 0.9 | 1.1 | 0.0 | 0.0 | 0.0 |
| racovitzan antarctious .le.s4 | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 |
| chord:uroc thali:salp | 1.7 | 0.1 | 0.0 | 0.8 | 2.0 |
| scaphocala brevicornis s6f | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| tessarabra oculatus | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |

| | | | | | |
|---|---|---|---|---|---|
| tomopteris septentriona | 0.1 | 0.1 | 0.4 | 0.1 | 0.0 |
| arthropoda crust:cope unidentified | 0.0 | 0.7 | 0.1 | 0.0 | 0.0 |
| limacina sp. | 0.9 | 0.0 | 0.6 | 4.6 | 9.0 |
| decapoda squid juvenile | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| lophothrix sp. | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| neocalanus plumchrus var.1/2 1/2 | 2.7 | 0.2 | 0.1 | 0.0 | 6.7 |
| neocalanus plumchrus var.1/2 3 | 6.9 | 0.1 | 0.1 | 0.3 | 22.4 |
| neocalanus plumchrus var.2 4 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 |
| neocalanus plumchrus var.2 5 | 9.5 | 0.2 | 0.3 | 0.3 | 18.4 |
| "funny thing" | 0.2 | 0.7 | 5.4 | 7.0 | 0.0 |
| heterostyl sp. .1e.4 | 1.6 | 0.0 | 0.0 | 0.0 | 0.0 |
| heterostyl sp. 6f | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| amphipoda shovel_head | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| scaphocala magnus 5 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| scaphocala magnus 6f | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| lophothrix frontalis 6f | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | 8-6 | 8-7 |
|---|---|---|
| parathemis sp. | 0.2 | 3.9 |
| chaetognat unidentified juveniles | 0.7 | 3.9 |
| sagitta elegans | 1.8 | 2.0 |
| eukrohnia hamata | 0.0 | 0.1 |
| aglantha sp. | 0.0 | 0.1 |
| nectophore bracts | 0.0 | 1.3 |
| calanus pacificus .le.s5 | 1.3 | 0.0 |
| eucalanus bungi s3 | 0.7 | 2.5 |
| eucalanus bungi s4 | 7.2 | 8.8 |
| eucalanus bungi s5m | 0.7 | 2.7 |
| eucalanus bungi s5f | 3.9 | 3.8 |
| eucalanus bungi s6f | 0.1 | 2.0 |
| euchaeta japonica s6f | 0.1 | 0.0 |
| metridia sp. .le.s3 | 24.9 | 42.7 |
| metridia sp. s4 | 9.2 | 6.3 |
| metridia pacifica s5m | 3.9 | 2.5 |
| metridia pacifica s5f | 2.0 | 0.0 |
| neocalanus cristatus s4 | 0.7 | 0.0 |
| neocalanus cristatus s5 | 1.1 | 1.3 |
| neocalanus plumchrus s4 | 21.7 | 16.4 |
| neocalanus plumchrus s5 | 2.0 | 20.1 |
| oithona helgolanoica | 299.6 | 605.4 |
| oithona spinirostris | 0.7 | 5.0 |
| pseudocala sp. .le.s3 | 25.5 | 66.5 |
| pseudocala sp. s4 | 37.4 | 65.3 |
| pseudocala sp. s5m | 20.3 | 15.0 |
| pseudocala sp. s5f | 18.4 | 11.3 |
| pseudocala sp. s6m | 11.1 | 11.3 |
| pseudocala sp. s6f | 51.8 | 90.4 |
| microcalan sp. s6f | 0.7 | 0.0 |
| nematoscel sp. | 0.3 | 1.7 |
| oncaea sp. | 0.0 | 1.3 |
| chord:uroc thali:salp | 2.4 | 1.5 |
| limacina sp. | 0.7 | 2.5 |
| neocalanus plumchrus var.1/2 1/2 | 37.4 | 51.5 |

| | | | |
|---|---|---|---|
| neocalanus plumchrus var.1/2 | 3 | 23.0 | 27.7 |
| neocalanus plumchrus var.2 | 5 | 93.8 | 113.0 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | 9-1 | 9-2 | 9-3 | 9-4 | 9-5 |
|---|---|---|---|---|---|
| parathemis sp. | 0.1 | 0.1 | 0.1 | 0.2 | 0.3 |
| euprimno sp. | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |
| chaetognat unidentified juveniles | 0.0 | 3.4 | 0.3 | 0.0 | 2.0 |
| sagitta elegans | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| eukrohnia hamata | 4.1 | 2.2 | 0.3 | 1.6 | 7.1 |
| copepod nauplii | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| euphausid larva | 0.8 | 0.0 | 4.1 | 15.0 | 9.8 |
| amphipoda unidentified juveniles | 0.0 | 0.0 | 1.5 | 3.0 | 3.9 |
| larvacean larvaceans | 8.7 | 2.6 | 21.7 | 43.2 | 3.0 |
| aglantha sp. | 0.2 | 0.2 | 0.6 | 0.1 | 0.0 |
| conchoecia sp. | 10.5 | 5.2 | 6.4 | 0.5 | 0.0 |
| neotophore bracts | 0.8 | 3.1 | 4.4 | 2.5 | 0.0 |
| acartia longiremis s6m | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 |
| calanus pacificus .le.s5 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| calanus tenuicornis s5 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 |
| calanus tenuicornis s6f | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 |
| eucalanus bungi s3 | 0.5 | 0.5 | 0.6 | 3.0 | 2.0 |
| eucalanus bungi s4 | 5.0 | 1.5 | 4.3 | 15.4 | 24.9 |
| eucalanus bungi s5m | 3.8 | 0.8 | 2.1 | 15.0 | 11.9 |
| eucalanus bungi s5f | 4.8 | 1.1 | 3.8 | 21.9 | 14.4 |
| eucalanus bungi s6m | 0.4 | 0.8 | 0.0 | 0.0 | 0.0 |
| eucalanus bungi s6f | 2.5 | 1.1 | 4.5 | 14.1 | 3.2 |
| euchaeta japonica s1/2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s3 | 0.0 | 0.1 | 0.2 | 0.0 | 0.0 |
| euchaeta japonica s6f | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| metridia sp. .le.s3 | 10.5 | 8.6 | 29.7 | 52.3 | 50.9 |
| metridia sp. s4 | 4.6 | 3.2 | 5.7 | 15.0 | 16.6 |
| metridia pacifica s5m | 3.3 | 0.6 | 2.6 | 9.0 | 3.9 |
| metridia pacifica s5f | 1.5 | 0.2 | 0.9 | 2.5 | 7.8 |
| metridia pacifica s6m | 0.5 | 0.3 | 0.0 | 0.0 | 0.0 |
| metridia pacifica s6f | 1.5 | 0.8 | 1.4 | 4.5 | 1.0 |
| neocalanus cristatus s1 | 0.0 | 0.0 | 0.0 | 2.5 | 0.0 |
| neocalanus cristatus s2 | 0.3 | 0.0 | 0.4 | 1.5 | 2.0 |
| neocalanus cristatus s3 | 0.0 | 0.0 | 0.4 | 1.5 | 2.0 |
| neocalanus cristatus s4 | 1.5 | 0.8 | 1.9 | 0.5 | 6.0 |

| | | | | | |
|---|---|---|---|---|---|
| neocalanus cristatus s5 | 1.9 | 0.0 | 0.6 | 0.3 | 2.3 |
| neocalanus plumchrus s4 | 19.9 | 0.1 | 0.4 | 0.0 | 55.8 |
| neocalanus plumchrus s5 | 9.9 | 0.0 | 0.3 | 0.0 | 59.7 |
| oithona helgolanoica | 1.5 | 0.5 | 3.9 | 16.4 | 89.1 |
| oithona spinirostris | 1.5 | 1.7 | 9.9 | 48.8 | 37.2 |
| pseudocala sp. .le.s3 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 |
| pseudocala sp. s4 | 3.8 | 0.1 | 0.0 | 0.0 | 22.5 |
| pseudocala sp. s5m | 0.8 | 0.0 | 0.2 | 0.0 | 12.7 |
| pseudocala sp. s5f | 2.0 | 0.0 | 0.0 | 0.0 | 11.8 |
| pseudocala sp. s6m | 0.5 | 0.1 | 0.0 | 0.5 | 6.8 |
| pseudocala sp. s6f | 3.6 | 0.0 | 0.2 | 0.5 | 18.6 |
| scolecithr minor .le.s4 | 0.5 | 0.1 | 1.2 | 7.0 | 4.9 |
| scolecithr minor s5 | 0.3 | 0.1 | 0.9 | 3.5 | 1.0 |
| scolecithr minor s6m | 0.0 | 0.0 | 0.2 | 2.5 | 0.0 |
| scolecithr minor s6f | 0.8 | 0.0 | 1.2 | 2.0 | 1.0 |
| aetideus armatus s6f | 0.0 | 0.1 | 0.2 | 0.0 | 0.0 |
| aetideus armatus s5 | 0.0 | 0.1 | 0.2 | 0.0 | 0.0 |
| candacia columbiae .le.s4 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| clausocala sp. s6f | 0.0 | 0.0 | 0.0 | 0.0 | 3.9 |
| clausocala sp. s6m | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 |
| clausocala sp. s5 | 0.0 | 0.0 | 0.0 | 0.0 | 7.8 |
| clausocala sp. .le.s4 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 |
| clione sp. | 0.3 | 1.7 | 15.4 | 2.0 | 3.9 |
| gaetanus sp. .le.s4 | 0.8 | 0.4 | 0.0 | 0.0 | 0.0 |
| heterorhab tanneri s6f | 0.0 | 0.1 | 0.0 | 0.0 | 1.0 |
| hyperia sp. | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| lucicutia sp. s5 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 |
| microcalan sp. s5 | 1.3 | 0.3 | 4.9 | 3.0 | 2.0 |
| microcalan sp. s6f | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| oncaea sp. | 0.3 | 0.1 | 0.7 | 3.0 | 2.0 |
| annelida polychaeta larvae | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| racovitzan antarcticus s6f | 0.8 | 0.3 | 0.0 | 0.0 | 0.0 |
| racovitzan antarcticus s5 | 0.3 | 0.1 | 0.0 | 0.0 | 0.0 |
| racovitzan antarcticus .le.s4 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| chord:uroc thali:salp | 1.6 | 0.2 | 0.0 | 3.7 | 0.0 |
| tomopteris septentriona | 0.2 | 0.1 | 0.6 | 0.0 | 0.1 |
| arthropoda crust:cope unidentified | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 |
| limacina sp. | 0.5 | 0.1 | 1.2 | 3.5 | 13.7 |
| microsetel spp. | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| neocalanus plumchrus var.1/2 1/2 | 5.6 | 0.2 | 0.5 | 0.0 | 13.9 |
| neocalanus plumchrus var.1/2 3 | 18.1 | 0.0 | 0.2 | 0.0 | 50.0 |
| neocalanus plumchrus var.2 5 | 13.5 | 0.1 | 0.3 | 0.0 | 54.8 |
| "funny thing" | 0.0 | 1.0 | 3.5 | 0.0 | 0.0 |
| amphipoda shovel_head | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 |
| pteropod big triangle | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | 9-6 | 9-7 |
|---|---|---|
| parathemis sp. | 0.2 | 0.0 |
| chaetognat unidentified juveniles | 0.0 | 1.2 |
| sagitta elegans | 0.8 | 0.0 |
| eukrohnia hamata | 0.1 | 0.0 |
| larvacean larvaceans | 0.0 | 5.4 |
| conohoecia sp. | 0.0 | 11.9 |
| eucalanus bungi s4 | 0.0 | 4.8 |
| eucalanus bungi s5m | 0.0 | 0.1 |
| eucalanus bungi s5f | 0.0 | 0.6 |
| eucalanus bungi s6f | 0.0 | 0.8 |
| metridia sp. .le.s3 | 0.0 | 1.8 |
| metridia sp. s4 | 0.0 | 1.2 |
| neocalanus cristatus s5 | 0.1 | 0.2 |
| neocalanus plumchrus s4 | 164.9 | 28.1 |
| neocalanus plumchrus s5 | 171.1 | 3.0 |
| oithona helgolanoica | 162.8 | 368.1 |
| oithona spinirostris | 4.2 | 2.4 |
| pseudocala sp. .le.s3 | 16.7 | 8.4 |
| pseudocala sp. s4 | 71.0 | 9.6 |
| pseudocala sp. s5m | 18.8 | 1.2 |
| pseudocala sp. s5f | 6.3 | 0.6 |
| pseudocala sp. s6m | 6.3 | 1.2 |
| pseudocala sp. s6f | 52.2 | 5.4 |
| olausocala sp. s5 | 0.0 | 0.6 |
| olione sp. | 0.0 | 0.6 |
| heterorhab tanneri s6f | 0.0 | 0.6 |
| oncaea sp. | 0.0 | 2.4 |
| arthropoda crust:copepod unidentified | 2.1 | 0.0 |
| limacina sp. | 52.2 | 23.3 |
| neocalanus plumchrus var.1/2 1/2 | 68.9 | 46.0 |
| neocalanus plumchrus var.1/2 3 | 106.4 | 53.7 |
| neocalanus plumchrus var.2 4 | 0.0 | 0.6 |
| neocalanus plumchrus var.2 5 | 104.4 | 7.7 |
| "funny thing" | 2.1 | 0.6 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | 11-1 | 11-2 | 11-3 | 11-4 | 11-5 |
|---|---|---|---|---|---|
| parathemis sp. | 0.8 | 0.1 | 0.2 | 0.8 | 1.2 |
| euprimno sp. | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 |
| chaetognat unidentified juveniles | 2.6 | 1.8 | 3.2 | 3.6 | 1.0 |
| sagitta elegans | 0.3 | 0.1 | 0.0 | 0.1 | 0.3 |
| eukrohnia hamata | 5.1 | 1.9 | 3.1 | 7.9 | 16.8 |
| euphausid larva | 3.0 | 0.0 | 7.7 | 15.4 | 12.4 |
| crust:mala euphausiac juveniles | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 |
| amphipoda unidentified juveniles | 0.0 | 0.0 | 2.2 | 0.8 | 0.0 |
| larvacean larvaceans | 5.0 | 0.3 | 8.6 | 34.0 | 30.0 |
| aglantha sp. | 0.2 | 0.3 | 0.3 | 0.0 | 0.0 |
| conchoecia sp. | 10.0 | 8.6 | 6.3 | 0.0 | 0.0 |
| neotophore bracts | 0.8 | 1.8 | 0.9 | 0.0 | 0.0 |
| calanus pacificus .le.s5 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| calanus tenuicornis s5 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| eucalanus bungi s3 | 1.0 | 1.5 | 2.7 | 2.8 | 2.1 |
| eucalanus bungi s4 | 9.8 | 4.4 | 4.1 | 14.6 | 10.4 |
| eucalanus bungi s5m | 2.6 | 0.9 | 3.6 | 8.1 | 5.2 |
| eucalanus bungi s5f | 3.8 | 1.8 | 5.0 | 10.1 | 15.5 |
| eucalanus bungi s6m | 0.4 | 1.3 | 0.0 | 0.0 | 0.0 |
| eucalanus bungi s6f | 2.4 | 1.1 | 4.2 | 4.9 | 5.7 |
| euchaeta japonica s1/2 | 0.0 | 0.3 | 0.5 | 0.0 | 0.0 |
| euchaeta japonica s6f | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| metridia sp. .le.s3 | 16.6 | 16.1 | 88.2 | 9.3 | 33.1 |
| metridia sp. s4 | 7.6 | 5.0 | 20.8 | 2.4 | 0.0 |
| metridia pacifica s5m | 13.4 | 5.9 | 35.3 | 5.7 | 25.9 |
| metridia pacifica s5f | 6.6 | 2.4 | 13.1 | 0.4 | 15.5 |
| metridia pacifica s6m | 0.0 | 0.1 | 0.5 | 0.0 | 0.0 |
| metridia pacifica s6f | 6.0 | 1.8 | 19.9 | 0.8 | 1.0 |
| neocalanus cristatus s1 | 0.4 | 0.1 | 3.2 | 1.2 | 0.0 |
| neocalanus cristatus s2 | 0.0 | 0.0 | 1.8 | 2.8 | 0.0 |
| neocalanus cristatus s3 | 0.4 | 0.0 | 0.5 | 13.4 | 0.0 |
| neocalanus cristatus s4 | 3.0 | 0.8 | 5.4 | 15.4 | 5.2 |
| neocalanus cristatus s5 | 4.9 | 3.3 | 2.2 | 5.3 | 6.4 |
| neocalanus plumchrus s4 | 12.4 | 0.1 | 0.5 | 3.2 | 91.1 |
| neocalanus plumchrus s5 | 5.8 | 0.1 | 0.9 | 0.8 | 115.9 |

| | | | | | |
|---|---|---|---|---|---|
| oithona helgolanoica | 5.4 | 1.5 | 11.3 | 14.2 | 179.0 |
| oithona spinirostris | 3.0 | 0.9 | 37.5 | 19.4 | 13.4 |
| pseudocala sp. s4 | 2.2 | 0.0 | 0.0 | 0.4 | 11.4 |
| pseudocala sp. s5m | 1.8 | 0.0 | 0.0 | 1.6 | 8.3 |
| pseudocala sp. s5f | 1.2 | 0.0 | 0.0 | 0.4 | 9.3 |
| pseudocala sp. s6m | 1.6 | 0.0 | 0.0 | 0.0 | 9.3 |
| pseudocala sp. s6f | 3.2 | 0.0 | 0.5 | 2.0 | 26.9 |
| scolecithr minor .le.s4 | 1.6 | 0.1 | 3.2 | 5.3 | 2.1 |
| scolecithr minor s5 | 0.6 | 0.4 | 1.8 | 2.0 | 0.0 |
| scolecithr minor s6m | 0.0 | 0.0 | 1.4 | 0.4 | 0.0 |
| scolecithr minor s6f | 0.6 | 0.4 | 0.9 | 2.0 | 1.0 |
| aetideus armatus s6f | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 |
| aetideus armatus s5 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| aetideus armatus .le.s4 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| candacia columbiae .le.s4 | 0.6 | 0.4 | 0.0 | 0.0 | 0.0 |
| clausocala sp. s6f | 0.4 | 0.0 | 0.0 | 0.0 | 4.1 |
| clausocala sp. s5 | 0.2 | 0.0 | 0.0 | 0.0 | 3.1 |
| clausocala sp. .le.s4 | 0.4 | 0.0 | 0.0 | 0.0 | 3.1 |
| clione sp. | 2.4 | 1.6 | 8.2 | 0.8 | 0.0 |
| crust:mala isopoda cryptoniscid | 0.4 | 0.1 | 0.0 | 0.0 | 0.0 |
| gaetanus sp. .le.s4 | 1.6 | 1.1 | 0.0 | 0.0 | 0.0 |
| heterorhab tanneri s6f | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| heterorhab tanneri s6m | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| heterorhab tanneri s5 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| heterorhab tanneri .le.s4 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| lucicutia sp. s5 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| microcalan sp. s5 | 0.8 | 0.8 | 5.9 | 5.7 | 2.1 |
| microcalan sp. s6f | 0.2 | 0.1 | 0.5 | 0.0 | 0.0 |
| nematoscel sp. | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| oncaea sp. | 0.0 | 0.1 | 0.5 | 0.4 | 1.0 |
| annelida polychaeta larvae | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| racovitzan antarcticus s6f | 0.4 | 0.9 | 0.0 | 0.0 | 0.0 |
| racovitzan antarcticus s5 | 0.4 | 0.6 | 0.0 | 0.0 | 0.0 |
| racovitzan antarcticus .le.s4 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| sagitta scrippsae | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| chord:uroc thali:salp | 1.2 | 0.4 | 0.0 | 3.1 | 0.3 |
| tomopteris septentriona | 0.1 | 0.3 | 0.1 | 0.0 | 0.0 |
| arthropoda crust:cope unidentified | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| limacina sp. | 1.2 | 0.1 | 5.0 | 6.1 | 12.4 |
| microsetel spp. | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 |
| neocalanus plumchrus var.1/2 1/2 | 4.6 | 0.1 | 0.0 | 0.4 | 32.1 |
| neocalanus plumchrus var.1/2 3 | 8.6 | 0.1 | 0.5 | 1.6 | 76.6 |
| neocalanus plumchrus var.2 5 | 10.6 | 0.4 | 0.5 | 0.4 | 141.8 |
| "funny thing" | 0.2 | 1.4 | 0.9 | 0.0 | 0.0 |
| heterostyl sp. .le.4 | 0.4 | 0.1 | 0.0 | 0.0 | 0.0 |
| amphipoda shovel_head | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 |
| pteropod small triangle | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | 11-6 | 11-7 |
|---|---|---|
| sagitta elegans | 0.3 | 0.0 |
| eukrohnia hamata | 0.3 | 0.4 |
| euphausid larva | 2.1 | 0.0 |
| larvacean larvaceans | 0.0 | 3.0 |
| aglantha sp. | 0.0 | 0.1 |
| calanus tenuicornis s5 | 1.0 | 0.0 |
| eucalanus bungi s3 | 0.0 | 0.1 |
| eucalanus bungi s4 | 1.0 | 0.0 |
| eucalanus bungi s5m | 1.0 | 0.4 |
| eucalanus bungi s5f | 0.0 | 0.2 |
| eucalanus bungi s6f | 0.2 | 0.6 |
| metridia sp. .le.s3 | 1.0 | 0.1 |
| metridia pacifica s5m | 0.0 | 0.1 |
| metridia pacifica s5f | 1.0 | 0.0 |
| neocalanus cristatus s4 | 0.0 | 0.3 |
| neocalanus cristatus s5 | 0.3 | 0.3 |
| neocalanus plumchrus s4 | 74.0 | 6.6 |
| neocalanus plumchrus s5 | 38.0 | 1.4 |
| oithona helgolanoica | 486.0 | 683.4 |
| pseudocala sp. .le.s3 | 23.6 | 2.0 |
| pseudocala sp. s4 | 49.3 | 2.0 |
| pseudocala sp. s5m | 13.3 | 0.0 |
| pseudocala sp. s5f | 8.2 | 0.0 |
| pseudocala sp. s6m | 15.4 | 0.0 |
| pseudocala sp. s6f | 49.3 | 0.0 |
| olione sp. | 2.1 | 0.0 |
| limacina sp. | 15.4 | 2.0 |
| neocalanus plumchrus var.1/2 1/2 | 104.8 | 44.6 |
| neocalanus plumchrus var.1/2 3 | 96.6 | 7.9 |
| neocalanus plumchrus var.2 5 | 45.2 | 2.2 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | 13-1 | 13-2 | 13-3 | 13-4 | 13-5 |
|---|---|---|---|---|---|
| parathemis sp. | 0.5 | 0.2 | 0.0 | 0.0 | 1.3 |
| euprimno sp. | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| cyphocaris sp. | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| chaetognat unidentified juveniles | 1.5 | 2.1 | 3.2 | 3.8 | 5.7 |
| sagitta elegans | 0.1 | 0.2 | 0.0 | 0.0 | 0.1 |
| eukrohnia hamata | 4.9 | 1.9 | 1.7 | 12.6 | 16.3 |
| copepod nauplii | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| euphausid larva | 2.7 | 0.0 | 2.8 | 17.9 | 19.3 |
| amphipoda unidentified juveniles | 1.7 | 0.0 | 0.2 | 1.3 | 0.0 |
| euphausia pacifica | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| larvacean larvaceans | 0.3 | 0.8 | 0.0 | 0.7 | 1.2 |
| aglantha sp. | 0.1 | 0.1 | 1.1 | 0.2 | 0.0 |
| conchoecia sp. | 13.0 | 10.3 | 3.2 | 5.1 | 0.0 |
| nectophore bracts | 1.3 | 0.9 | 2.1 | 0.9 | 0.0 |
| acartia longiremis .le.s4/5 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 |
| acartia longiremis s6m | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 |
| calanus tenuicornis .le.s4 | 0.0 | 0.0 | 0.7 | 0.0 | 0.0 |
| calanus tenuicornis s5 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 |
| calanus tenuicornis s6m | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| calanus tenuicornis s6f | 0.0 | 0.0 | 0.4 | 0.2 | 0.0 |
| eucalanus bungi s3 | 1.3 | 1.6 | 0.7 | 3.5 | 4.5 |
| eucalanus bungi s4 | 7.5 | 2.8 | 2.4 | 17.7 | 23.8 |
| eucalanus bungi s5m | 2.8 | 0.9 | 0.9 | 2.2 | 14.7 |
| eucalanus bungi s5f | 3.7 | 1.1 | 0.9 | 8.8 | 15.9 |
| eucalanus bungi s6m | 0.5 | 0.7 | 0.0 | 0.0 | 1.2 |
| eucalanus bungi s6f | 3.3 | 1.5 | 1.7 | 10.7 | 12.6 |
| euchaeta japonica s1/2 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 |
| euchaeta japonica s4 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s6m | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| metridia sp. .le.s3 | 9.5 | 10.2 | 61.3 | 37.9 | 49.9 |
| metridia sp. s4 | 10.0 | 6.4 | 22.7 | 19.2 | 4.5 |
| metridia pacifica s5m | 10.1 | 3.1 | 12.6 | 11.0 | 36.3 |
| metridia pacifica s5f | 6.0 | 1.0 | 8.3 | 5.1 | 32.9 |
| metridia pacifica s6f | 2.0 | 0.6 | 2.4 | 18.3 | 22.7 |
| neocalanus cristatus s1 | 0.0 | 0.3 | 1.1 | 4.8 | 0.0 |

| | | | | | |
|---|---|---|---|---|---|
| neocalanus cristatus s2 | 0.0 | 0.1 | 0.7 | 5.7 | 0.0 |
| neocalanus cristatus s3 | 0.0 | 0.0 | 0.2 | 3.1 | 0.0 |
| neocalanus cristatus s4 | 4.7 | 1.5 | 1.7 | 4.4 | 40.9 |
| neocalanus cristatus s5 | 4.6 | 7.2 | 0.2 | 0.3 | 9.4 |
| neocalanus plumchrus s4 | 19.1 | 0.0 | 0.7 | 7.3 | 116.9 |
| neocalanus plumchrus s5 | 8.3 | 0.1 | 0.7 | 0.0 | 17.0 |
| oithona helgolandica | 3.8 | 0.4 | 3.6 | 11.2 | 143.0 |
| oithona spinirostris | 3.3 | 0.6 | 14.3 | 82.0 | 36.3 |
| pseudocala sp. .le.s3 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| pseudocala sp. s4 | 3.7 | 0.1 | 0.0 | 0.2 | 5.7 |
| pseudocala sp. s5m | 1.8 | 0.0 | 0.0 | 0.4 | 9.1 |
| pseudocala sp. s5f | 1.3 | 0.0 | 0.0 | 0.0 | 13.6 |
| pseudocala sp. s6m | 1.0 | 0.0 | 0.0 | 0.0 | 3.4 |
| pseudocala sp. s6f | 4.8 | 0.0 | 0.0 | 0.9 | 9.1 |
| scolecithr minor .le.s4 | 1.2 | 0.2 | 0.4 | 8.6 | 2.3 |
| scolecithr minor s5 | 0.8 | 0.1 | 1.5 | 2.7 | 0.0 |
| scolecithr minor s6m | 0.2 | 0.0 | 2.6 | 0.7 | 1.2 |
| scolecithr minor s6f | 1.0 | 0.2 | 2.6 | 2.9 | 4.5 |
| aetideus armatus s6f | 0.2 | 0.1 | 0.9 | 0.0 | 0.0 |
| aetideus armatus s6m | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| aetideus armatus s5 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| candacia bipinnata s6f | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| candacia columbiae s6m | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| candacia columbiae .le.s4 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| chiridius gracilis .le.s4 | 0.0 | 0.0 | 0.0 | 0.0 | 3.4 |
| clausocala sp. s6f | 0.2 | 0.2 | 0.0 | 0.2 | 2.3 |
| clausocala sp. s5 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 |
| clione sp. | 0.2 | 0.4 | 3.6 | 1.1 | 3.4 |
| crust:mala isopoda cryptoniscid | 0.2 | 0.0 | 0.4 | 0.0 | 0.0 |
| vert:fish larvae | 0.0 | 0.0 | 0.1 | 0.5 | 0.0 |
| gaetanus sp. .le.s4 | 0.5 | 0.5 | 0.0 | 0.0 | 0.0 |
| lucicutia sp. s6m | 0.0 | 0.0 | 0.4 | 0.2 | 0.0 |
| microcalan sp. s5 | 1.5 | 0.8 | 8.1 | 3.8 | 2.3 |
| microcalan sp. s6f | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| nematoscel sp. | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 |
| oncaea sp. | 2.7 | 0.1 | 0.0 | 1.8 | 6.8 |
| pleuromamm scutullata .le.s4 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| racovitzan antarcticus s6f | 0.3 | 1.8 | 0.0 | 0.0 | 0.0 |
| racovitzan antarcticus s5 | 1.2 | 0.7 | 0.0 | 0.0 | 0.0 |
| racovitzan antarcticus .le.s4 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| sagitta scrippsae | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| chord:uroo thali:salp | 1.3 | 0.1 | 0.0 | 0.5 | 0.1 |
| tomopteris septentriona | 0.1 | 0.1 | 0.0 | 0.2 | 0.0 |
| arthropoda crust:copepoda unidentified | 0.8 | 0.3 | 0.0 | 0.0 | 0.0 |
| limacina sp. | 4.2 | 0.0 | 3.2 | 13.7 | 42.0 |
| decapoda squid juvenile | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| neocalanus plumchrus var.1/2 1/2 | 6.1 | 0.1 | 0.0 | 0.0 | 11.4 |
| neocalanus plumchrus var.1/2 3 | 10.5 | 0.1 | 0.0 | 4.0 | 69.2 |
| neocalanus plumchrus var.2 5 | 11.6 | 0.2 | 0.9 | 0.4 | 7.9 |

| | | | | | |
|---|---|---|---|---|---|
| "funny thing" | 0.7 | 1.7 | 13.5 | 0.0 | 1.2 |
| heterostyl sp. .1e.4 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 |
| amphipoda shovel_head | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| pteropod big triangle | 0.1 | 0.0 | 0.0 | 0.0 | 1.2 |
| limacina large | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | 13-6 | 13-7 |
|---|---|---|
| sagitta elegans | 0.1 | 0.1 |
| eukrohnia hamata | 0.3 | 0.4 |
| euphausid larva | 6.8 | 0.0 |
| acartia longiremis s6m | 2.3 | 0.0 |
| eucalanus bungi s3 | 2.3 | 0.7 |
| eucalanus bungi s4 | 0.0 | 2.7 |
| eucalanus bungi s5m | 6.8 | 0.0 |
| eucalanus bungi s5f | 4.5 | 0.0 |
| eucalanus bungi s6f | 6.2 | 0.0 |
| metridia sp. .le.s3 | 4.5 | 0.0 |
| metridia sp. s4 | 2.3 | 0.0 |
| metridia pacifica s5m | 68.1 | 0.0 |
| metridia pacifica s5f | 22.7 | 0.0 |
| neocalanus cristatus s4 | 0.0 | 0.2 |
| neocalanus cristatus s5 | 0.1 | 0.9 |
| neocalanus plumchrus s4 | 61.3 | 0.0 |
| neocalanus plumchrus s5 | 65.9 | 1.4 |
| oithona helgolandica | 517.9 | 1819.8 |
| pseudocala sp. .le.s3 | 70.3 | 7.9 |
| pseudocala sp. s4 | 131.8 | 7.9 |
| pseudocala sp. s5m | 47.7 | 2.7 |
| pseudocala sp. s5f | 38.6 | 2.7 |
| pseudocala sp. s6m | 6.8 | 0.0 |
| pseudocala sp. s6f | 106.8 | 0.0 |
| clausocala sp. s6f | 9.1 | 0.0 |
| clausocala sp. s5 | 6.8 | 0.0 |
| clausocala sp. .le.s4 | 6.8 | 0.0 |
| limacina sp. | 2.3 | 2.0 |
| neocalanus plumchrus var.1/2 1/2 | 88.6 | 18.6 |
| neocalanus plumchrus var.1/2 3 | 88.6 | 0.7 |
| neocalanus plumchrus var.2 5 | 141.2 | 0.0 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | 14-1 | 14-2 | 14-3 | 14-4 | 14-5 |
|---|---|---|---|---|---|
| parathemis sp. | 0.3 | 0.4 | 0.0 | 0.0 | 0.7 |
| euprimno sp. | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| cyphocaris sp. | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| chaetognat unidentified juveniles | 3.2 | 1.6 | 0.0 | 5.8 | 1.8 |
| sagitta elegans | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 |
| eukrohnia hamata | 4.1 | 3.2 | 0.0 | 12.0 | 21.5 |
| euphausid larva | 1.7 | 0.0 | 0.0 | 8.5 | 15.4 |
| amphipoda unidentified juveniles | 0.9 | 0.3 | 0.0 | 1.9 | 4.2 |
| euphausia pacifica | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| larvacean larvaceans | 0.3 | 0.3 | 0.0 | 0.0 | 1.2 |
| aglantha sp. | 0.1 | 0.0 | 0.0 | 0.9 | 0.1 |
| conchoecia sp. | 6.3 | 7.2 | 0.0 | 6.6 | 0.0 |
| neotophore bracts | 0.5 | 1.4 | 0.0 | 0.8 | 0.0 |
| calanus pacificus .le.s5 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 |
| calanus tenuicornis s5 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 |
| calanus tenuicornis s6f | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 |
| eucalanus bungi s3 | 0.3 | 0.3 | 0.0 | 0.8 | 0.0 |
| eucalanus bungi s4 | 3.1 | 0.9 | 0.0 | 7.2 | 12.5 |
| eucalanus bungi s5m | 1.7 | 0.3 | 0.0 | 0.8 | 2.4 |
| eucalanus bungi s5f | 1.5 | 0.3 | 0.0 | 2.5 | 7.7 |
| eucalanus bungi s6m | 0.6 | 0.3 | 0.0 | 0.0 | 0.0 |
| eucalanus bungi s6f | 2.2 | 0.9 | 0.0 | 4.6 | 8.4 |
| euchaeta japonica s1/2 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s3 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s4 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s5m | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s6m | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s6f | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| metridia sp. .le.s3 | 7.0 | 5.8 | 0.0 | 22.6 | 41.6 |
| metridia sp. s4 | 4.3 | 2.4 | 0.0 | 9.6 | 1.2 |
| metridia pacifica s5m | 2.4 | 0.6 | 0.0 | 5.5 | 3.6 |
| metridia pacifica s5f | 2.6 | 0.4 | 0.0 | 4.1 | 4.2 |
| metridia pacifica s6m | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| metridia pacifica s6f | 2.6 | 1.0 | 0.0 | 2.7 | 41.6 |
| neocalanus cristatus s1 | 0.0 | 0.0 | 0.0 | 8.0 | 0.0 |

| | | | | | |
|---|---|---|---|---|---|
| neocalanus oristatus s2 | 0.0 | 0.0 | 0.0 | 3.6 | 3.0 |
| neocalanus oristatus s3 | 0.2 | 0.0 | 0.0 | 1.7 | 2.4 |
| neocalanus oristatus s4 | 3.1 | 0.3 | 0.0 | 0.8 | 22.6 |
| neocalanus oristatus s5 | 4.1 | 8.1 | 0.0 | 0.1 | 6.0 |
| neocalanus plumohrus s4 | 13.3 | 0.1 | 0.0 | 0.3 | 21.4 |
| neocalanus plumohrus s5 | 5.0 | 0.0 | 0.0 | 0.0 | 1.8 |
| oithona helgolanoica | 1.2 | 0.1 | 0.0 | 22.0 | 55.8 |
| oithona spinirostris | 5.2 | 0.9 | 0.0 | 70.9 | 10.7 |
| pseudocala sp. .le.s3 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| pseudocala sp. s4 | 2.3 | 0.0 | 0.0 | 0.0 | 3.6 |
| pseudocala sp. s5m | 2.3 | 0.1 | 0.0 | 0.0 | 4.2 |
| pseudocala sp. s5f | 1.4 | 0.0 | 0.0 | 0.0 | 6.5 |
| pseudocala sp. s6m | 0.5 | 0.0 | 0.0 | 0.3 | 2.4 |
| pseudocala sp. s6f | 4.0 | 0.0 | 0.0 | 0.3 | 4.2 |
| scolecithr minor .le.s4 | 1.1 | 0.2 | 0.0 | 6.0 | 1.8 |
| scolecithr minor s5 | 0.3 | 0.2 | 0.0 | 1.4 | 1.8 |
| scolecithr minor s6m | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| scolecithr minor s6f | 0.6 | 0.3 | 0.0 | 3.8 | 3.0 |
| aetideus armatus s6f | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| aetideus armatus s6m | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| aetideus armatus s5 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| aetideus armatus .le.s4 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| candacia columbiae s6f | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| candacia columbiae s6m | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 |
| candacia columbiae .le.s4 | 0.3 | 1.0 | 0.0 | 0.0 | 0.0 |
| clausocala sp. s6f | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 |
| oIione sp. | 0.7 | 0.5 | 0.0 | 0.8 | 0.6 |
| vert:fish larvae | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| gaetanus sp. .le.s4 | 1.2 | 1.4 | 0.0 | 0.0 | 0.0 |
| heterorhab tanneri s6f | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| heterorhab tanneri s6m | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| lucicutia sp. .le.s4 | 0.0 | 0.0 | 0.0 | 1.7 | 0.0 |
| lucicutia sp. s5 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 |
| microcalan sp. s5 | 1.1 | 0.7 | 0.0 | 12.1 | 3.0 |
| nematoscel sp. | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| oncaea sp. | 2.4 | 3.1 | 0.0 | 0.3 | 0.0 |
| annelida polychaeta larvae | 0.2 | 0.0 | 0.0 | 0.0 | 0.6 |
| racovitzan antarcticus s6f | 0.3 | 1.0 | 0.0 | 0.0 | 0.0 |
| racovitzan antarcticus s5 | 0.0 | 0.6 | 0.0 | 0.0 | 0.0 |
| racovitzan antarcticus .le.s4 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| sagitta scrippsae | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 |
| chord:uroc thali:salp | 1.8 | 0.1 | 0.0 | 0.0 | 1.1 |
| tomopteris septentriona | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| arthropoda orust:oope unidentified | 0.3 | 0.4 | 0.0 | 0.3 | 0.0 |
| limacina sp. | 2.4 | 0.0 | 0.0 | 9.9 | 11.9 |
| beroe spp. | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| decapoda squid juvenile | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| phronima spp. | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| neocalanus plumohrus var.1/2 1/2 | 7.0 | 0.5 | 0.0 | 0.0 | 4.7 |

| | | | | | |
|---|---|---|---|---|---|
| neocalanus plumchrus var.1/2 3 | 7.8 | 0.1 | 0.0 | 0.5 | 32.0 |
| neocalanus plumchrus var.2 5 | 6.7 | 0.3 | 0.0 | 0.8 | 1.8 |
| "funny thing" | 1.2 | 1.5 | 0.0 | 4.9 | 0.0 |
| heterostyl sp. .1e.4 | 0.8 | 0.4 | 0.0 | 0.0 | 0.0 |
| heterostyl sp. 6f | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| amphipoda shovel_head | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| pteropod small triangle | 0.1 | 0.0 | 0.0 | 0.3 | 0.0 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | 14-6 | 14-7 |
|---|---|---|
| parathemis sp. | 2.3 | 0.0 |
| sagitta elegans | 0.1 | 0.0 |
| eukrohnia hamata | 7.8 | 0.6 |
| euphausid larva | 0.0 | 2.1 |
| amphipoda unidentified juveniles | 0.0 | 2.1 |
| acartia longiremis s6m | 6.3 | 0.0 |
| eucalanus bungi s6m | 0.0 | 0.1 |
| eucalanus bungi s6f | 0.1 | 0.0 |
| metridia sp. .le.s3 | 296.2 | 10.3 |
| metridia sp. s4 | 33.6 | 0.0 |
| metridia pacifica s5m | 81.9 | 0.0 |
| metridia pacifica s5f | 88.2 | 0.0 |
| metridia pacifica s6f | 31.5 | 0.0 |
| neocalanus cristatus s4 | 0.0 | 1.6 |
| neocalanus cristatus s5 | 1.7 | 0.1 |
| neocalanus plumchrus s4 | 205.8 | 12.2 |
| neocalanus plumchrus s5 | 79.9 | 2.2 |
| oithona helgolanoica | 453.8 | 1177.6 |
| oithona spinirostris | 2.1 | 0.0 |
| pseudocala sp. .le.s3 | 25.2 | 107.1 |
| pseudocala sp. s4 | 98.7 | 107.1 |
| pseudocala sp. s5m | 31.5 | 41.2 |
| pseudocala sp. s5f | 42.0 | 35.0 |
| pseudocala sp. s6m | 27.3 | 16.5 |
| pseudocala sp. s6f | 56.7 | 70.0 |
| clausocala sp. s6f | 4.2 | 0.0 |
| clausocala sp. s5 | 2.1 | 4.1 |
| clausocala sp. .le.s4 | 12.6 | 0.0 |
| limacina sp. | 12.6 | 2.1 |
| neocalanus plumchrus var.1/2 1/2 | 100.8 | 96.8 |
| neocalanus plumchrus var.1/2 3 | 84.0 | 17.5 |
| neocalanus plumchrus var.2 5 | 113.4 | 22.9 |
| "funny thing" | 2.1 | 0.0 |
| heterostyl sp. 6f | 0.0 | 0.1 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | G-1 | G-2 | G-3 | G-4 | G-5 |
|---|---|---|---|---|---|
| euprimno sp. | 0.1 | 0.2 | 0.1 | 0.2 | 0.0 |
| oyphocaris sp. | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 |
| ohaetognat unidentified juveniles | 0.4 | 1.0 | 0.1 | 1.4 | 0.0 |
| sagitta elegans | 0.0 | 0.1 | 1.7 | 0.1 | 0.1 |
| eukrohnia hamata | 2.6 | 2.7 | 0.1 | 17.9 | 20.8 |
| euphausid larva | 0.1 | 0.0 | 0.4 | 6.2 | 20.2 |
| amphipoda unidentified juveniles | 0.2 | 0.2 | 1.2 | 1.4 | 0.0 |
| euphausia pacifica | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 |
| larvacean larvaceans | 0.3 | 5.7 | 3.1 | 5.2 | 3.5 |
| aglantha sp. | 0.1 | 0.1 | 0.2 | 0.1 | 0.0 |
| conchoecia sp. | 3.8 | 17.5 | 13.3 | 9.6 | 0.9 |
| nectophore bracts | 0.0 | 5.2 | 1.4 | 5.5 | 0.0 |
| calanus pacifious .le.s5 | 1.7 | 0.0 | 0.1 | 0.3 | 0.0 |
| calanus tenuicornis s5 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 |
| calanus tenuicornis s6f | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| eucalanus bungi s3 | 0.2 | 2.5 | 0.2 | 1.4 | 0.9 |
| eucalanus bungi s4 | 4.8 | 5.7 | 2.3 | 17.5 | 26.7 |
| eucalanus bungi s5m | 1.0 | 1.5 | 3.3 | 11.7 | 15.6 |
| eucalanus bungi s5f | 1.1 | 1.5 | 2.7 | 11.0 | 14.7 |
| eucalanus bungi s6m | 0.1 | 0.3 | 0.0 | 0.3 | 0.0 |
| eucalanus bungi s6f | 0.7 | 2.1 | 3.6 | 17.1 | 6.5 |
| euchaeta japonica s1/2 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s3 | 0.0 | 0.3 | 0.2 | 0.7 | 0.0 |
| euchaeta japonica s4 | 0.0 | 0.0 | 0.1 | 0.0 | 0.9 |
| euchaeta japonica s5m | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s5f | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s6m | 0.0 | 0.1 | 0.0 | 0.2 | 0.3 |
| euchaeta japonica s6f | 0.1 | 0.1 | 0.1 | 0.2 | 0.7 |
| metridia sp. .le.s3 | 2.5 | 20.9 | 9.3 | 16.2 | 14.1 |
| metridia sp. s4 | 2.4 | 10.4 | 3.7 | 13.1 | 7.9 |
| metridia pacifica s5m | 0.9 | 1.0 | 0.0 | 3.1 | 8.8 |
| metridia pacifica s5f | 0.6 | 0.8 | 0.8 | 3.4 | 0.9 |
| metridia pacifica s6m | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 |
| metridia pacifica s6f | 1.2 | 0.8 | 15.4 | 3.4 | 6.1 |
| neocalanus cristatus s1 | 0.0 | 0.0 | 0.0 | 1.4 | 0.0 |

| | | | | | |
|---|---|---|---|---|---|
| neocalanus cristatus s2 | 0.0 | 0.5 | 0.2 | 1.4 | 1.8 |
| neocalanus cristatus s3 | 0.0 | 0.0 | 0.1 | 0.7 | 0.9 |
| neocalanus cristatus s4 | 0.0 | 0.7 | 0.7 | 1.0 | 12.5 |
| neocalanus cristatus s5 | 0.1 | 2.4 | 3.8 | 5.6 | 5.8 |
| neocalanus plumchrus s4 | 0.0 | 0.2 | 0.0 | 0.0 | 93.0 |
| neocalanus plumchrus s5 | 0.1 | 0.2 | 0.3 | 2.1 | 27.6 |
| oithona helgolanoica | 0.6 | 2.4 | 1.8 | 6.2 | 0.9 |
| oithona spinirostris | 0.3 | 7.1 | 3.9 | 41.3 | 11.4 |
| pseudocala sp. .le.s3 | 0.0 | 0.0 | 0.1 | 0.0 | 4.4 |
| pseudocala sp. s4 | 0.0 | 0.3 | 0.0 | 0.0 | 2.7 |
| pseudocala sp. s5m | 0.0 | 0.0 | 0.0 | 0.0 | 6.1 |
| pseudocala sp. s5f | 0.0 | 0.0 | 0.0 | 0.0 | 1.8 |
| pseudcoala sp. s6m | 0.0 | 0.0 | 0.1 | 0.0 | 1.8 |
| pseudocala sp. s6f | 0.0 | 0.5 | 0.1 | 1.7 | 6.1 |
| scolecithr minor .le.s4 | 0.3 | 0.0 | 0.1 | 1.7 | 7.9 |
| scolecithr minor s5 | 0.4 | 0.0 | 0.2 | 0.3 | 3.5 |
| scolecithr minor s6m | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 |
| scolecithr minor s6f | 0.3 | 0.5 | 0.4 | 1.0 | 6.1 |
| aetideus armatus s6f | 0.0 | 0.0 | 0.1 | 0.3 | 0.0 |
| aetideus armatus .le.s4 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| mollusca bivalva larva | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| candacia bipinnata s6f | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| candacia columbiae s6f | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| candacia columbiae s5 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| candacia columbiae .le.s4 | 0.1 | 0.0 | 0.4 | 0.3 | 1.8 |
| clione sp. | 0.3 | 6.6 | 5.9 | 2.7 | 3.5 |
| corycaeus sp. | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| crust:mala isopoda cryptoniscid | 0.0 | 0.2 | 0.1 | 0.0 | 0.0 |
| cyphonaute larva | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| euchaeta sp. | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 |
| gaetanus sp. s6f | 0.3 | 0.7 | 1.9 | 0.7 | 0.0 |
| gaetanus sp. s5 | 0.1 | 0.2 | 0.0 | 0.7 | 0.0 |
| gaetanus sp. .le.s4 | 2.4 | 3.4 | 0.0 | 4.8 | 0.0 |
| heterorhab sp. s6m | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| heterorhab tanneri s6f | 0.1 | 0.3 | 0.0 | 0.0 | 0.0 |
| heterorhab tanneri s6m | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| hyperia sp. | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| microcalan sp. s5 | 0.6 | 0.3 | 0.1 | 1.0 | 0.0 |
| microcalan sp. s6f | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| microcalan sp. s6m | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| deca:natan natantia | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 |
| nematoscel sp. | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 |
| oncaea sp. | 8.0 | 1.0 | 0.1 | 0.0 | 0.0 |
| pleuromamm sp. | 0.2 | 0.0 | 0.0 | 1.4 | 0.0 |
| pleuromamm scutullata s6f | 0.0 | 3.0 | 3.9 | 13.8 | 0.0 |
| pleuromamm scutullata s6m | 0.1 | 0.0 | 0.0 | 1.4 | 0.0 |
| pleuromamm scutullata s5 | 0.1 | 0.7 | 0.1 | 0.0 | 0.0 |
| racovitzan antarcticus s6f | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 |
| racovitzan antarcticus s5 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 |

| | | | | | |
|---|---|---|---|---|---|
| chord:uroc thali:salp | 0.0 | 0.0 | 0.4 | 0.9 | 0.9 |
| scina sp. | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| thysanoess raschii | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| tomopteris septentriona | 0.0 | 0.7 | 0.1 | 0.1 | 0.9 |
| arthropoda crust:cope unidentified | 1.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| arthropoda euphausid unidentified | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| limacina sp. | 0.0 | 0.0 | 0.2 | 0.3 | 24.6 |
| decapoda squid juvenile | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 |
| neocalanus spp. s1/2 | 0.0 | 0.0 | 0.0 | 0.7 | 0.0 |
| neocalanus plumchrus var.1/2 1/2 | 0.1 | 0.7 | 0.0 | 0.3 | 26.3 |
| neocalanus plumchrus var.1/2 3 | 0.0 | 0.3 | 0.4 | 0.0 | 55.3 |
| neocalanus plumchrus var.2 5 | 0.7 | 1.0 | 0.9 | 0.0 | 8.5 |
| "funny thing" | 0.0 | 3.5 | 2.6 | 0.7 | 0.0 |
| heterostyl sp. .le.4 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| heterostyl sp. 6m | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| heterostyl sp. 6f | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| scaphocala magnus 5 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| scaphocala magnus 6f | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| lophothrix frontalis 6f | 0.1 | 0.2 | 0.1 | 0.0 | 0.0 |
| euchaeta (big) 6f | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| paraeuchae glacialis 6m | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| paraeuchae spinifera 6m | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| haloptilus pseudooxycep ?w | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| haloptilus pseudooxycep 6f | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| lucicutia ovalis 5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 |
| lucicutia ovalis 6f | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 |
| pteropod small triangle | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | G-6 |
|---|---|
| parathemis sp. | 5.5 |
| chaetognat unidentified juveniles | 3.4 |
| sagitta elegans | 2.3 |
| eukrohnia hamata | 0.4 |
| euphausid larva | 1.7 |
| amphipoda unidentified juveniles | 3.4 |
| euphausia pacifica | 2.3 |
| thysanoess spinifera | 0.1 |
| aglantha sp. | 8.8 |
| conchoecia sp. | 1.7 |
| calanus pacificus .le.s5 | 1.7 |
| eucalanus bungi s4 | 0.9 |
| eucalanus bungi s5m | 0.9 |
| euchaeta japonica s6f | 1.4 |
| metridia sp. s4 | 1.7 |
| metridia pacifica s5m | 11.9 |
| metridia pacifica s5f | 1.7 |
| metridia pacifica s6f | 25.5 |
| neocalanus cristatus s5 | 0.6 |
| neocalanus plumchrus s4 | 1.7 |
| neocalanus plumchrus s5 | 9.5 |
| oithona helgolanoica | 217.9 |
| oithona spinirostris | 3.4 |
| pseudocala sp. .le.s3 | 28.9 |
| pseudocala sp. s4 | 86.8 |
| pseudocala sp. s5m | 46.0 |
| pseudocala sp. s5f | 37.4 |
| pseudocala sp. s6m | 13.6 |
| pseudocala sp. s6f | 81.7 |
| aegina sp. | 0.1 |
| nematoscel sp. | 0.7 |
| chord:uroc thali:salp | 0.9 |
| tomopteris septentriona | 0.7 |
| decapoda squid juvenile | 0.1 |
| neocalanus plumchrus var.1/2 1/2 | 30.6 |

| | |
|---|---|
| neocalanus plumchrus var.1/2 3 | 8.5 |
| neocalanus plumchrus var.2 4 | 1.7 |
| neocalanus plumchrus var.2 5 | 195.7 |
| amphipoda shovel_head | 0.1 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | J-1 | J-2 | J-4 | J-5 | J-6 |
|---|---|---|---|---|---|
| parathemis sp. | 0.1 | 0.9 | 0.1 | 0.0 | 0.0 |
| euprimno sp. | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| cyphocaris sp. | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 |
| chaetognat unidentified juveniles | 0.2 | 1.4 | 0.3 | 0.3 | 0.7 |
| sagitta elegans | 0.0 | 0.2 | 0.0 | 0.0 | 0.1 |
| eukrohnia hamata | 1.9 | 5.0 | 0.7 | 3.4 | 9.9 |
| unidentifi eggs | 0.0 | 0.0 | 0.2 | 0.9 | 0.7 |
| euphausid larva | 0.1 | 0.1 | 1.1 | 6.9 | 13.1 |
| decapod larva | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| amphipoda unidentified juveniles | 0.0 | 0.5 | 0.2 | 1.8 | 1.3 |
| euphausia pacifica | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 |
| thysanoess spinifera | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| larvacean larvaceans | 0.5 | 2.6 | 0.0 | 0.0 | 0.0 |
| aglantha sp. | 0.1 | 0.0 | 0.4 | 0.1 | 0.0 |
| conchoecia sp. | 5.0 | 11.5 | 2.9 | 0.9 | 0.0 |
| nectophore bracts | 0.0 | 1.0 | 1.1 | 4.1 | 0.0 |
| calanus pacificus .le.s5 | 0.7 | 0.1 | 0.1 | 0.0 | 1.3 |
| calanus sp. s1/2 | 0.1 | 0.0 | 0.0 | 0.3 | 0.0 |
| calanus tenuicornis s6f | 0.0 | 0.0 | 0.1 | 0.3 | 0.0 |
| eucalanus bungi s3 | 0.1 | 0.6 | 0.1 | 0.9 | 0.0 |
| eucalanus bungi s4 | 1.4 | 4.6 | 2.5 | 8.5 | 20.3 |
| eucalanus bungi s5m | 0.8 | 0.7 | 3.9 | 13.0 | 5.2 |
| eucalanus bungi s5f | 0.6 | 0.6 | 3.5 | 18.1 | 20.9 |
| eucalanus bungi s6m | 0.1 | 1.8 | 0.1 | 1.5 | 16.3 |
| eucalanus bungi s6f | 0.1 | 0.7 | 3.5 | 10.9 | 3.4 |
| euchaeta japonica s1/2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s3 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 |
| euchaeta japonica s4 | 0.1 | 0.1 | 0.2 | 0.0 | 0.0 |
| euchaeta japonica s5m | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s5f | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s6m | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 |
| euchaeta japonica s6f | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 |
| metridia sp. .le.s3 | 1.3 | 10.0 | 18.5 | 13.0 | 17.7 |
| metridia sp. s4 | 2.0 | 3.5 | 4.3 | 3.3 | 2.0 |
| metridia pacifica s5m | 0.9 | 3.4 | 2.1 | 8.2 | 11.1 |

| | | | | | |
|---|---|---|---|---|---|
| metridia pacifica s5f | 1.0 | 2.8 | 0.9 | 3.3 | 13.7 |
| metridia pacifica s6m | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 |
| metridia pacifica s6f | 1.7 | 5.1 | 2.2 | 3.6 | 7.9 |
| neocalanus cristatus s2 | 0.0 | 0.1 | 0.1 | 0.6 | 0.0 |
| neocalanus cristatus s3 | 0.0 | 0.0 | 0.1 | 0.0 | 5.2 |
| neocalanus cristatus s4 | 0.0 | 0.2 | 0.4 | 0.9 | 9.2 |
| neocalanus cristatus s5 | 0.1 | 4.6 | 0.4 | 0.1 | 2.0 |
| neocalanus plumchrus s4 | 0.1 | 0.1 | 0.8 | 0.6 | 44.5 |
| neocalanus plumchrus s5 | 0.0 | 0.1 | 0.3 | 0.0 | 7.9 |
| oithona helgolanoica | 0.2 | 0.0 | 0.4 | 2.1 | 10.5 |
| oithona spinirostris | 0.3 | 0.1 | 4.5 | 21.8 | 7.9 |
| pseudocala sp. .le.s3 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 |
| pseudocala sp. s4 | 0.0 | 0.1 | 0.0 | 0.0 | 6.5 |
| pseudocala sp. s5m | 0.1 | 0.0 | 0.1 | 0.0 | 6.5 |
| pseudocala sp. s5f | 0.1 | 0.0 | 0.1 | 0.0 | 7.2 |
| pseudocala sp. s6m | 0.0 | 0.0 | 0.0 | 0.0 | 3.9 |
| pseudocala sp. s6f | 0.1 | 0.0 | 0.1 | 0.3 | 21.6 |
| scolecithr minor .le.s4 | 0.1 | 0.2 | 0.1 | 0.0 | 2.0 |
| scolecithr minor s5 | 0.1 | 0.2 | 0.1 | 0.9 | 4.6 |
| scolecithr minor s6m | 0.0 | 0.0 | 0.0 | 0.6 | 2.0 |
| scolecithr minor s6f | 0.1 | 0.1 | 0.6 | 4.2 | 5.2 |
| aetideus armatus s6f | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| aetideus armatus .le.s4 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| candacia columbiae s6f | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| candacia columbiae s6m | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| candacia columbiae s5 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| candacia columbiae .le.s4 | 0.1 | 1.0 | 0.0 | 0.0 | 0.0 |
| clione sp. | 0.4 | 0.2 | 5.0 | 1.8 | 1.3 |
| crust:mala isopoda cryptonisoid | 0.0 | 0.0 | 0.7 | 0.0 | 0.0 |
| euchaeta sp. | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| gaetanus sp. s6f | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| gaetanus sp. s5 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| gaetanus sp. .le.s4 | 1.2 | 2.7 | 0.1 | 0.0 | 0.0 |
| heterorhab tanneri s6f | 0.1 | 0.3 | 0.0 | 0.0 | 0.0 |
| heterorhab tanneri s6m | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| heterorhab tanneri s5 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| heterorhab tanneri .le.s4 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 |
| microcalan sp. s5 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| microcalan sp. s6f | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| microcalan sp. s6m | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| decа:natan natantia | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| nematoscel sp. | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| oncaea sp. | 5.5 | 1.0 | 0.2 | 0.3 | 0.0 |
| pleuromamm scutullata s6f | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 |
| pleuromamm scutullata s6m | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 |
| pleuromamm scutullata s5 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| racovitzan antarctious s6f | 0.0 | 0.3 | 0.1 | 0.0 | 0.0 |
| racovitzan antarctious s5 | 0.1 | 1.2 | 0.0 | 0.0 | 0.0 |
| racovitzan antarctious .le.s4 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |

| | | | | | |
|---|---|---|---|---|---|
| sagitta scrippsae | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| chord:uroc thali:salp | 0.0 | 0.0 | 0.1 | 1.0 | 3.2 |
| tomopteris septentriona | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| arthropoda crust:cope unidentified | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| limacina sp. | 0.1 | 0.0 | 0.0 | 1.2 | 7.2 |
| decapoda squid juvenile | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| neocalanus plumchrus var.1/2 1/2 | 0.1 | 0.3 | 0.1 | 1.8 | 5.9 |
| neocalanus plumchrus var.1/2 3 | 0.0 | 0.5 | 0.3 | 0.6 | 27.5 |
| neocalanus plumchrus var.2 5 | 0.4 | 0.2 | 1.5 | 0.6 | 36.0 |
| "funny thing" | 0.2 | 0.6 | 2.8 | 0.0 | 0.0 |
| heterostyl sp. .le.4 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| heterostyl sp. 5 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| heterostyl sp. 6m | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| heterostyl sp. 6f | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| amphipoda shovel_head | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 |
| lophothrix frontalis 6f | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| euchaeta (big) 6f | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | J-7 |
|---|---|
| sagitta elegans | 0.6 |
| eukrohnia hamata | 0.5 |
| unidentifi eggs | 1.7 |
| decapod larva | 1.1 |
| amphipoda unidentified juveniles | 1.1 |
| calanus pacificus .le.s5 | 2.9 |
| eucalanus bungi s3 | 0.6 |
| eucalanus bungi s4 | 6.3 |
| eucalanus bungi s5m | 1.2 |
| eucalanus bungi s5f | 1.2 |
| eucalanus bungi s6m | 0.3 |
| eucalanus bungi s6f | 1.0 |
| euchaeta japonica s6m | 0.1 |
| euchaeta japonica s6f | 0.1 |
| metridia sp. .le.s3 | 10.8 |
| metridia sp. s4 | 0.6 |
| metridia pacifica s5m | 3.4 |
| metridia pacifica s5f | 0.6 |
| metridia pacifica s6f | 2.9 |
| neocalanus cristatus s3 | 0.6 |
| neocalanus cristatus s4 | 0.6 |
| neocalanus cristatus s5 | 0.6 |
| neocalanus plumchrus s4 | 62.9 |
| neocalanus plumchrus s5 | 26.0 |
| oithona helgolanoica | 1.1 |
| oithona spinirostris | 3.4 |
| pseudocala sp. .le.s3 | 1.7 |
| pseudocala sp. s4 | 15.9 |
| pseudocala sp. s5m | 8.5 |
| pseudocala sp. s5f | 14.1 |
| pseudocala sp. s6m | 2.3 |
| pseudocala sp. s6f | 28.9 |
| aetideus armatus s5 | 0.6 |
| arthropoda crust:cope unidentified | 0.6 |
| limacina sp. | 8.5 |

| | |
|---|---|
| neocalanus plumchrus var.1/2 1/2 | 34.0 |
| neocalanus plumchrus var.1/2 3 | 74.8 |
| neocalanus plumchrus var.2 4 | 1.1 |
| neocalanus plumchrus var.2 5 | 106.0 |
| amphipoda shovel_head | 0.1 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | K-1 | K-2 | K-3 | K-4 | K-5 |
|---|---|---|---|---|---|
| parathemis sp. | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 |
| euprimno sp. | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 |
| cyphocaris sp. | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| chaetognat unidentified juveniles | 0.2 | 0.1 | 0.8 | 1.3 | 2.4 |
| sagitta elegans | 0.1 | 0.1 | 0.1 | 0.0 | 1.4 |
| eukrohnia hamata | 2.1 | 3.7 | 1.3 | 1.7 | 4.4 |
| euphausid larva | 0.1 | 0.1 | 0.1 | 3.2 | 7.8 |
| amphipoda unidentified juveniles | 0.0 | 0.0 | 0.4 | 0.5 | 1.5 |
| euphausia pacifica | 0.0 | 0.1 | 0.0 | 0.0 | 1.2 |
| larvacean larvaceans | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 |
| aglantha sp. | 0.1 | 0.1 | 0.1 | 0.0 | 0.3 |
| conchoecia sp. | 0.6 | 7.9 | 11.6 | 6.3 | 1.0 |
| nectophore bracts | 0.1 | 1.2 | 1.6 | 2.0 | 0.0 |
| calanus pacificus .le.s5 | 0.3 | 0.0 | 0.0 | 0.1 | 1.5 |
| calanus tenuicornis .le.s4 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |
| calanus tenuicornis s6f | 0.0 | 0.0 | 0.0 | 0.1 | 0.5 |
| eucalanus bungi s3 | 0.2 | 0.3 | 0.3 | 0.2 | 1.5 |
| eucalanus bungi s4 | 1.3 | 3.9 | 2.0 | 6.6 | 24.9 |
| eucalanus bungi s5m | 0.5 | 1.4 | 0.9 | 7.9 | 7.3 |
| eucalanus bungi s5f | 0.4 | 1.8 | 1.7 | 10.8 | 13.2 |
| eucalanus bungi s6m | 0.2 | 0.7 | 0.0 | 0.0 | 0.0 |
| eucalanus bungi s6f | 0.1 | 2.7 | 1.9 | 6.4 | 3.2 |
| euchaeta japonica s1/2 | 0.0 | 0.4 | 0.4 | 0.0 | 0.0 |
| euchaeta japonica s3 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 |
| euchaeta japonica s5m | 0.1 | 0.0 | 0.1 | 0.5 | 0.1 |
| euchaeta japonica s5f | 0.1 | 0.0 | 0.1 | 0.1 | 0.5 |
| euchaeta japonica s6m | 0.1 | 0.1 | 0.1 | 0.0 | 0.7 |
| euchaeta japonica s6f | 0.1 | 0.1 | 0.1 | 1.1 | 0.6 |
| metridia sp. .le.s3 | 0.3 | 7.3 | 25.7 | 23.2 | 46.9 |
| metridia sp. s4 | 1.1 | 3.2 | 3.0 | 1.2 | 3.4 |
| metridia pacifica s5m | 0.3 | 0.7 | 0.4 | 1.0 | 6.4 |
| metridia pacifica s5f | 0.1 | 0.2 | 0.6 | 0.2 | 4.4 |
| metridia pacifica s6m | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| metridia pacifica s6f | 0.2 | 0.1 | 0.5 | 1.5 | 6.4 |
| neocalanus cristatus s1 | 0.0 | 0.0 | 0.1 | 0.3 | 0.0 |

| | | | | | |
|---|---|---|---|---|---|
| neocalanus cristatus s2 | 0.0 | 0.0 | 0.1 | 0.6 | 1.0 |
| neocalanus cristatus s3 | 0.0 | 0.0 | 0.1 | 0.6 | 2.4 |
| neocalanus cristatus s4 | 0.1 | 0.3 | 0.1 | 0.1 | 4.9 |
| neocalanus cristatus s5 | 1.7 | 1.0 | 0.1 | 1.8 | 5.9 |
| neocalanus plumchrus s4 | 0.1 | 0.2 | 0.1 | 0.7 | 34.7 |
| neocalanus plumchrus s5 | 0.0 | 0.1 | 0.0 | 0.1 | 6.4 |
| oithona helgolanoica | 0.1 | 0.1 | 0.2 | 2.3 | 20.5 |
| oithona spinirostris | 0.1 | 1.7 | 3.3 | 15.1 | 23.5 |
| pseudocala sp. .le.s3 | 0.0 | 0.0 | 0.0 | 0.1 | 8.8 |
| pseudocala sp. s4 | 0.1 | 0.1 | 0.1 | 0.0 | 23.9 |
| pseudocala sp. s5m | 0.1 | 0.0 | 0.0 | 0.0 | 12.7 |
| pseudocala sp. s5f | 0.1 | 0.0 | 0.1 | 0.0 | 10.8 |
| pseudocala sp. s6m | 0.0 | 0.0 | 0.0 | 0.0 | 8.8 |
| pseudocala sp. s6f | 0.1 | 0.1 | 0.1 | 0.3 | 33.7 |
| scolecithr minor .le.s4 | 0.0 | 0.1 | 0.1 | 1.5 | 1.0 |
| scolecithr minor s5 | 0.1 | 0.2 | 0.3 | 1.3 | 1.0 |
| scolecithr minor s6m | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 |
| scolecithr minor s6f | 0.0 | 0.1 | 0.0 | 1.5 | 6.4 |
| aegina sp. | 0.0 | 0.1 | 0.0 | 0.1 | 0.1 |
| aetideus armatus s6f | 0.1 | 0.1 | 0.2 | 0.0 | 0.0 |
| aetideus armatus s5 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| aetideus armatus .le.s4 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| candacia columbiae s6f | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 |
| candacia columbiae s6m | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| candacia columbiae .le.s4 | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 |
| candacia sp. .le.s4 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 |
| clione sp. | 2.2 | 0.1 | 0.8 | 0.5 | 1.5 |
| crust:mala isopoda cryptonisoid | 0.1 | 0.0 | 0.3 | 0.1 | 0.5 |
| euchaeta sp. | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| vert:fish larvae | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 |
| gaetanus sp. s6f | 0.0 | 0.1 | 0.3 | 0.5 | 0.0 |
| gaetanus sp. s5 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 |
| gaetanus sp. .le.s4 | 1.2 | 2.0 | 0.6 | 0.0 | 0.0 |
| heterorhab tanneri s6f | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| hyperia sp. | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| microcalan sp. s5 | 0.0 | 0.1 | 0.0 | 0.7 | 0.0 |
| microcalan sp. s6m | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| deca:natan natantia | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 |
| nematoscel sp. | 0.0 | 0.1 | 0.1 | 0.2 | 0.5 |
| oncaea sp. | 4.1 | 0.1 | 0.0 | 0.1 | 0.0 |
| pleuromamm scutullata s6f | 0.1 | 0.1 | 0.5 | 0.0 | 0.0 |
| pleuromamm scutullata s6m | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 |
| pleuromamm scutullata s5 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| racovitzan antarcticus s6f | 0.1 | 0.6 | 0.0 | 0.0 | 0.0 |
| racovitzan antarcticus s5 | 0.1 | 0.5 | 0.0 | 0.0 | 0.0 |
| racovitzan antarcticus .le.s4 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 |
| sagitta scrippsae | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 |
| chord:uroc thali:salp | 0.4 | 0.0 | 0.0 | 1.0 | 0.9 |
| scina sp. | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |

| | | | | | |
|---|---|---|---|---|---|
| tomopteris septentriona | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 |
| arthropoda crust:cope unidentified | 0.4 | 0.5 | 0.0 | 0.0 | 0.0 |
| arthropoda euphausid unidentified | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| limacina sp. | 0.0 | 0.0 | 0.1 | 0.1 | 3.4 |
| decapoda squid juvenile | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 |
| neocalanus plumchrus var.1/2 1/2 | 0.0 | 0.3 | 0.1 | 0.1 | 20.0 |
| neocalanus plumchrus var.1/2 3 | 0.0 | 0.1 | 0.1 | 0.4 | 17.6 |
| neocalanus plumchrus var.2 5 | 0.2 | 0.3 | 0.2 | 1.0 | 60.6 |
| neocalanus plumchrus var.2 6m | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| neocalanus plumchrus var.2 6f | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| "funny thing" | 0.1 | 0.7 | 3.4 | 0.0 | 0.0 |
| heterostyl sp. .le.4 | 0.7 | 0.1 | 0.0 | 0.0 | 0.0 |
| heterostyl sp. 5 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| heterostyl sp. 6f | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| scaphocala magnus 5 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| lophothrix frontalis 5 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| lophothrix frontalis 6f | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| euchaeta (big) 6f | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| pleuromamm sp. .le.4 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | K-6 |
|---|---|
| parathemis sp. | 0.1 |
| chaetognat unidentified juveniles | 5.0 |
| sagitta elegans | 1.1 |
| eukrohnia hamata | 0.8 |
| unidentifi eggs | 3.5 |
| orust:mala euphausiac juveniles | 0.8 |
| amphipoda unidentified juveniles | 5.0 |
| euphausia pacifica | 1.2 |
| thysanoess spinifera | 0.1 |
| aglantha sp. | 0.5 |
| conchoecia sp. | 0.4 |
| calanus pacificus .le.s5 | 0.8 |
| eucalanus bungi s3 | 0.4 |
| eucalanus bungi s4 | 13.1 |
| eucalanus bungi s5m | 2.3 |
| eucalanus bungi s5f | 1.9 |
| eucalanus bungi s6f | 0.2 |
| euchaeta japonica s6m | 0.2 |
| euchaeta japonica s6f | 0.3 |
| metridia sp. .le.s3 | 24.3 |
| metridia sp. s4 | 0.8 |
| metridia pacifica s5m | 6.2 |
| metridia pacifica s5f | 3.5 |
| metridia pacifica s6f | 7.3 |
| neocalanus cristatus s3 | 0.4 |
| neocalanus cristatus s4 | 0.4 |
| neocalanus cristatus s5 | 1.6 |
| neocalanus plumchrus s3 | 16.6 |
| neocalanus plumchrus s4 | 25.4 |
| neocalanus plumchrus s5 | 6.9 |
| oithona helgolanoica | 59.4 |
| oithona spinirostris | 0.8 |
| pseudocala sp. .le.s3 | 11.6 |
| pseudocala sp. s4 | 39.7 |
| pseudocala sp. s5m | 11.2 |

| | |
|---|---|
| pseudocala sp. s5f | 13.1 |
| pseudocala sp. s6m | 4.6 |
| pseudocala sp. s6f | 31.6 |
| scolecithr minor s5 | 0.4 |
| scolecithr minor s6f | 0.8 |
| nematoscel sp. | 0.4 |
| chord:uroo thali:salp | 0.7 |
| tessarabra oculatus | 0.1 |
| tomopteris septentriona | 0.1 |
| limacina sp. | 7.3 |
| neocalanus plumchrus var.1/2 1/2 | 13.9 |
| neocalanus plumchrus var.2 5 | 50.1 |
| amphipoda shovel_head | 0.1 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | 18-1 | 18-2 | 18-3 | 18-4 | 18-5 |
|---|---|---|---|---|---|
| parathemis sp. | 0.0 | 0.1 | 0.5 | 0.1 | 0.1 |
| euprimno sp. | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| cyphocaris sp. | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| chaetognat unidentified juveniles | 0.2 | 2.2 | 2.9 | 2.5 | 4.8 |
| sagitta elegans | 0.0 | 0.1 | 0.1 | 0.2 | 0.1 |
| eukrohnia hamata | 2.7 | 5.2 | 2.7 | 3.6 | 4.8 |
| euphausid larva | 0.1 | 0.1 | 0.1 | 0.6 | 10.7 |
| amphipoda unidentified juveniles | 0.0 | 0.6 | 0.2 | 0.0 | 0.0 |
| euphausia pacifica | 0.1 | 0.6 | 0.0 | 0.0 | 0.0 |
| larvacean larvaceans | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| aglantha sp. | 0.1 | 0.0 | 1.2 | 1.1 | 0.1 |
| conchoecia sp. | 5.7 | 8.1 | 5.5 | 3.0 | 1.8 |
| neotophore bracts | 0.0 | 0.6 | 1.6 | 0.3 | 2.4 |
| calanus pacificus .le.s5 | 3.1 | 0.0 | 0.1 | 0.3 | 0.0 |
| calanus tenuicornis s6m | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 |
| calanus tenuicornis s6f | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 |
| eucalanus bungi s3 | 0.1 | 0.4 | 0.2 | 0.6 | 1.2 |
| eucalanus bungi s4 | 9.0 | 6.2 | 1.8 | 10.7 | 28.1 |
| eucalanus bungi s5m | 2.7 | 1.2 | 1.7 | 8.5 | 13.1 |
| eucalanus bungi s5f | 4.1 | 1.9 | 1.5 | 5.3 | 25.7 |
| eucalanus bungi s6m | 0.9 | 2.0 | 0.3 | 0.0 | 0.0 |
| eucalanus bungi s6f | 1.1 | 2.1 | 4.6 | 10.3 | 12.5 |
| euchaeta japonica s1/2 | 0.7 | 0.0 | 0.1 | 0.3 | 0.0 |
| euchaeta japonica s3 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 |
| euchaeta japonica s4 | 0.1 | 0.2 | 0.0 | 0.3 | 0.0 |
| euchaeta japonica s5m | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s5f | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 |
| euchaeta japonica s6m | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| euchaeta japonica s6f | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 |
| metridia sp. .le.s3 | 1.4 | 3.6 | 3.8 | 41.3 | 49.6 |
| metridia sp. s4 | 8.5 | 3.7 | 1.3 | 16.5 | 25.7 |
| metridia pacifica s5m | 4.9 | 1.5 | 0.1 | 2.5 | 5.4 |
| metridia pacifica s5f | 2.2 | 0.7 | 0.3 | 0.8 | 0.6 |
| metridia pacifica s6m | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 |
| metridia pacifica s6f | 1.2 | 1.0 | 3.4 | 2.5 | 1.8 |

| | | | | | |
|---|---|---|---|---|---|
| neocalanus cristatus s1 | 0.1 | 0.1 | 0.1 | 0.3 | 3.0 |
| neocalanus cristatus s2 | 0.0 | 0.0 | 0.1 | 0.0 | 6.0 |
| neocalanus cristatus s3 | 0.0 | 0.0 | 0.1 | 0.3 | 8.9 |
| neocalanus cristatus s4 | 0.0 | 0.4 | 1.2 | 1.1 | 7.8 |
| neocalanus cristatus s5 | 0.2 | 1.9 | 3.6 | 5.4 | 0.9 |
| neocalanus plumchrus s4 | 0.6 | 0.2 | 1.0 | 3.0 | 2.4 |
| neocalanus plumchrus s5 | 0.2 | 0.2 | 0.6 | 1.9 | 0.6 |
| oithona helgolanoica | 1.0 | 0.4 | 1.1 | 0.8 | 4.2 |
| oithona spinirostris | 0.9 | 0.0 | 2.6 | 7.7 | 82.3 |
| pseudocala sp. s4 | 0.0 | 0.1 | 0.1 | 0.3 | 0.0 |
| pseudocala sp. s5m | 0.2 | 0.1 | 0.1 | 0.3 | 0.6 |
| pseudocala sp. s5f | 0.2 | 0.0 | 0.1 | 0.6 | 0.6 |
| pseudocala sp. s6m | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| pseudocala sp. s6f | 0.0 | 0.0 | 0.1 | 0.3 | 0.0 |
| scolecithr minor .le.s4 | 0.1 | 0.1 | 0.1 | 0.3 | 1.2 |
| scolecithr minor s5 | 0.1 | 0.4 | 0.2 | 0.8 | 0.6 |
| scolecithr minor s6m | 0.0 | 0.0 | 0.0 | 1.4 | 1.2 |
| scolecithr minor s6f | 0.1 | 0.3 | 0.1 | 0.6 | 2.4 |
| aetideus armatus s6f | 0.0 | 0.0 | 0.3 | 1.1 | 0.0 |
| aetideus armatus s5 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| aetideus armatus .le.s4 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| candacia columbiae s6f | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| candacia columbiae .le.s4 | 0.0 | 0.1 | 0.0 | 0.6 | 0.0 |
| candacia sp. .le.s4 | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 |
| clausocala sp. s6f | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 |
| clausocala sp. s5 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| clione sp. | 1.0 | 0.2 | 0.1 | 8.5 | 1.2 |
| crust:mala isopoda cryptoniscid | 0.0 | 0.0 | 0.1 | 0.3 | 0.0 |
| vert:fish larvae | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| gaetanus sp. s6f | 2.7 | 0.3 | 0.0 | 0.0 | 0.0 |
| gaetanus sp. s5 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| gaetanus sp. .le.s4 | 3.2 | 2.0 | 0.3 | 0.0 | 0.6 |
| heterorhab tanneri s6f | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 |
| lucicutia sp. s5 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| lucicutia sp. s6m | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 |
| lucicutia sp. s6f | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 |
| microcalan sp. s5 | 0.6 | 0.0 | 0.4 | 1.4 | 2.4 |
| microcalan sp. s6f | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 |
| nematoscel sp. | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 |
| oncaea sp. | 9.3 | 0.1 | 0.2 | 0.6 | 0.6 |
| pleuromamm scutullata s6f | 2.2 | 0.0 | 0.1 | 0.3 | 0.6 |
| pleuromamm scutullata s6m | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| pleuromamm scutullata .le.s4 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 |
| annelida polychaeta larvae | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 |
| racovitzan antarcticus s6f | 0.0 | 2.3 | 1.2 | 0.3 | 0.6 |
| racovitzan antarcticus s5 | 0.1 | 1.1 | 0.7 | 0.6 | 0.0 |
| sagitta scrippsae | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| chord:uroc thali:salp | 0.2 | 0.0 | 0.0 | 0.0 | 0.3 |
| scina sp. | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |

| | | | | | |
|---|---|---|---|---|---|
| tomopteris septentriona | 0.1 | 0.1 | 0.4 | 0.4 | 0.7 |
| arthropoda crust:cope unidentified | 1.4 | 0.5 | 0.3 | 0.0 | 0.0 |
| limacina sp. | 0.1 | 0.0 | 0.0 | 0.0 | 4.8 |
| decapoda squid juvenile | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| phronima spp. | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| neocalanus plumchrus var.1/2 3 | 0.0 | 0.0 | 0.0 | 0.6 | 1.8 |
| neocalanus plumchrus var.2 5 | 1.2 | 0.3 | 0.3 | 1.1 | 0.0 |
| "funny thing" | 0.2 | 0.2 | 1.8 | 3.0 | 3.0 |
| heterostyl sp. .le.4 | 4.3 | 0.4 | 0.2 | 0.0 | 0.0 |
| heterostyl sp. 5 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| heterostyl sp. 6f | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| scaphocala magnus 6f | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| lophothrix frontalis 5 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| lophothrix frontalis 6f | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| euchaeta (big) 6f | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| haloptilus pseudooxycep 6f | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| spinocalan sp. | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| centraugap macrodus | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |

Cruise 84-02

Total Abundance (no./m**3)

| Taxon | 18-6 | 18-7 | 18-8 |
|---|---|---|---|
| parathemis sp. | 0.1 | 0.4 | 0.0 |
| chaetognat unidentified juveniles | 1.9 | 0.0 | 1.6 |
| sagitta elegans | 0.0 | 0.1 | 0.1 |
| eukrohnia hamata | 8.7 | 1.1 | 0.3 |
| euphausid larva | 3.0 | 0.8 | 0.0 |
| amphipoda unidentified juveniles | 0.0 | 2.4 | 5.0 |
| aglantha sp. | 0.1 | 0.0 | 0.0 |
| conchoecia sp. | 4.4 | 0.8 | 0.0 |
| calanus pacificus .le.s5 | 0.5 | 1.6 | 0.0 |
| calanus tenuicornis s5 | 0.7 | 0.0 | 0.0 |
| calanus tenuicornis s6m | 0.2 | 0.8 | 0.0 |
| eucalanus bungi s3 | 0.9 | 0.0 | 0.0 |
| eucalanus bungi s4 | 9.5 | 1.6 | 6.6 |
| eucalanus bungi s5m | 6.0 | 0.0 | 0.0 |
| eucalanus bungi s5f | 9.3 | 1.6 | 0.0 |
| eucalanus bungi s6f | 2.9 | 0.0 | 0.1 |
| metridia sp. .le.s3 | 63.3 | 43.0 | 56.3 |
| metridia sp. s4 | 8.6 | 2.4 | 1.6 |
| metridia pacifica s5m | 4.4 | 7.8 | 26.5 |
| metridia pacifica s5f | 1.2 | 0.8 | 3.3 |
| metridia pacifica s6f | 1.4 | 20.3 | 86.0 |
| neocalanus cristatus s1 | 0.2 | 0.0 | 0.0 |
| neocalanus cristatus s4 | 0.9 | 0.0 | 0.0 |
| neocalanus cristatus s5 | 0.4 | 0.0 | 0.1 |
| neocalanus plumchrus s4 | 36.7 | 139.1 | 132.4 |
| neocalanus plumchrus s5 | 2.5 | 109.4 | 187.0 |
| oithona helgolanoica | 21.5 | 37.5 | 238.3 |
| oithona spinirostris | 4.6 | 4.7 | 6.6 |
| pseudocala sp. .le.s3 | 0.0 | 6.2 | 26.5 |
| pseudocala sp. s4 | 3.2 | 14.9 | 69.5 |
| pseudocala sp. s5m | 5.8 | 23.5 | 33.1 |
| pseudocala sp. s5f | 5.8 | 18.7 | 39.7 |
| pseudocala sp. s6m | 1.2 | 5.5 | 26.5 |
| pseudocala sp. s6f | 4.2 | 20.3 | 145.6 |
| scolecithr minor .le.s4 | 0.7 | 0.0 | 0.0 |

| | | | |
|---|---|---|---|
| scolecithr minor s5 | 2.5 | 0.8 | 0.0 |
| scolecithr minor s6m | 0.2 | 1.6 | 1.6 |
| scolecithr minor s6f | 1.6 | 0.8 | 1.6 |
| clausocala sp. s6f | 0.0 | 0.8 | 0.0 |
| clausocala sp. s5 | 0.0 | 2.4 | 9.9 |
| clausocala sp. .le.s4 | 0.0 | 0.8 | 0.0 |
| olione sp. | 1.4 | 2.4 | 1.6 |
| heterorhab tanneri s6f | 0.2 | 0.0 | 0.0 |
| microcalan sp. s5 | 14.1 | 0.0 | 0.0 |
| nematoscel sp. | 0.0 | 0.1 | 0.0 |
| chord:uroc thali:salp | 4.1 | 1.8 | 0.4 |
| arthropoda euphausid unidentified | 0.0 | 0.0 | 0.1 |
| limacina sp. | 15.9 | 2.4 | 14.9 |
| neocalanus plumchrus var.1/2 1/2 | 4.6 | 10.2 | 13.2 |
| neocalanus plumchrus var.1/2 3 | 17.1 | 27.3 | 29.8 |
| neocalanus plumchrus var.2 5 | 3.2 | 97.7 | 112.5 |
| amphipoda shovel_head | 0.1 | 0.1 | 0.0 |
| pteropod small triangle | 0.2 | 0.0 | 0.0 |

Cruise 84-02: Record of Bioness Samples and Depth Ranges

| Station | Net | Sample number | Depth range (m) |
|---|---|---|---|
| 1 | 1 | 1-1 | 0 - 250 |
| | 2 | 1-2 | 237 - 101 |
| | 3 | 1-3 | 102 - 76 |
| | 4 | 1-4 | 76 - 50 |
| | 5 | 1-5 | 50 - 27 |
| | 6 | 1-6 | 27 - 10 |
| | 7 | 1-7 | 10 - 0 |
| 3 | 1 | 3-1 | 0 - 249 |
| | 2 | 3-2 | 249 - 102 |
| | 3 | 3-3 | 102 - 75 |
| | 4 | 3-4 | 75 - 47 |
| | 5 | 3-5 | 46 - 24 |
| | 6 | 3-6 | 24 - 9 |
| | 7 | 3-7 | 9 - 0 |
| 5 | 1 | 5-1 | 0 - 252 |
| | 2 | 5-2 | 248 - 101 |
| | 3 | 5-3 | 101 - 79 |
| | 4 | 5-4 | 79 - 50 |
| | 5 | 5-5 | 50 - 26 |
| | 6 | 5-6 | 26 - 10 |
| | 7 | 5-7 | 10 - 0 |
| 6 | 1 | 6-1 | 0 - 254 |
| | 2 | 6-2 | 253 - 105 |
| | 3 | 6-3 | 105 - 77 |
| | 4 | 6-4 | 77 - 52 |
| | 5 | 6-5 | 52 - 26 |
| | 6 | 6-6 | 26 - 12 |
| | 7 | 6-7 | 12 - 0 |
| 7 | 1 | 7-1 | 7 - 250 |
| | 2 | 7-2 | 244 - 102 |
| | 3 | 7-3 | 102 - 77 |
| | 4 | 7-4 | 77 - 52 |
| | 5 | 7-5 | 26 - 12 |
| | 6 | 7-6 | 12 - 0 |
| 8 | 1 | 8-1 | 2 - 250 |
| | 2 | 8-2 | 247 - 103 |
| | 3 | 8-3 | 103 - 77 |
| | 4 | 8-4 | 77 - 53 |
| | 5 | 8-5 | 53 - 24 |
| | 6 | 8-6 | 24 - 10 |
| | 7 | 8-7 | 10 - 0 |
| 9 | 1 | 9-1 | 5 - 248 |
| | 2 | 9-2 | 240 - 103 |
| | 3 | 9-3 | 103 - 75 |
| | 4 | 9-4 | 75 - 53 |
| | 5 | 9-5 | 53 - 25 |
| | 6 | 9-6 | 25 - 11 |
| | 7 | 9-7 | 11 - 0 |

| Station | Net | Sample number | Depth range (m) |
|---|---|---|---|
| 11 | 1 | 11-1 | 2 - 245 |
| | 2 | 11-2 | 243 - 102 |
| | 3 | 11-3 | 102 - 77 |
| | 4 | 11-4 | 77 - 52 |
| | 5 | 11-5 | 52 - 26 |
| | 6 | 11-6 | 26 - 10 |
| | 7 | 11 7 | 10 - 0 |
| 13 | 1 | 13 1 | 5 - 240 |
| | 2 | 13 2 | 246 - 102 |
| | 3 | 13 3 | 102 - 77 |
| | 4 | 13-4 | 77 - 51 |
| | 5 | 13-5 | 51 - 24 |
| | 6 | 13-6 | 24 - 9 |
| | 7 | 13-7 | 9 - 0 |
| 14 | 1 | 14-1 | 1 - 248 |
| | 2 | 14-2 | 247 - 101 |
| | 3 | 14-3 | 101 - 75 |
| | 4 | 14-4 | 75 - 52 |
| | 5 | 14-5 | 52 - 26 |
| | 6 | 14-6 | 26 - 10 |
| | 7 | 14-7 | 10 - 0 |
| G | 1 | G-1 | 400 - 253 |
| | 2 | G-2 | 150 - 101 |
| | 3 | G-3 | 101 - 77 |
| | 4 | G-4 | 77 - 49 |
| | 5 | G-5 | 49 - 24 |
| | 6 | G-6 | 12 0 |
| J | 1 | J-1 | 400 250 |
| | 2 | J-2 | 250 148 |
| | 4 | J-4 | 99 76 |
| | 5 | J-5 | 76 50 |
| | 6 | J-6 | 50 26 |
| | 7 | J-7 | 27 8 |
| K | 1 | K-1 | 400 237 |
| | 2 | K-2 | 237 153 |
| | 3 | K-3 | 153 76 |
| | 4 | K-4 | 76 - 51 |
| | 5 | K-5 | 51 25 |
| | 6 | K-6 | 25 0 |
| 18 | 1 | 18-1 | 388 248 |
| | 2 | 18-2 | 248 - 152 |
| | 3 | 18-3 | 152 - 103 |
| | 4 | 18-4 | 103 - 76 |
| | 5 | 18-5 | 76 - 53 |
| | 6 | 18-6 | 53 - 27 |
| | 7 | 18-7 | 27 - 12 |
| | 8 | 18-8 | 12 - 0 |